# PHILADELPHIA MEDICAL TIMES.


## CONTENTS.


ADDRESS:
THE PHYSICIAN IN LETTERS. By Benjamin Lee, A.M., M.D., Ph.D., of Philadelphia..... 97
ORIGINAL COMMUNICATIONS:
ON THE PATHOGENESIS OF YELLOW FEVER. By Prof. Ygnacio Alvarado, M.D., Delegate for Mexico, etc..... 102
ABSTRACT OF PRESIDENT'S ADDRESS READ BEFORE THE AMERICAN PUBLIC HEALTH ASSOCIATION. By G. M. Sternberg, M.D., Major and Surgeon U. S. A..... 107
A SERIOUS DEFECT IN THERAPEUTIC LITERATURE. By Mary Willits, A.M., M.D., of Philadelphia..... 108
HOSPITAL NOTES:
UNIVERSITY OF THE CITY OF NEW YORK. Service of Wesley M. Carpenter, M.D. Clinical Remarks on Washing out the Stomach, in Dilated Stomach 111
TRANSLATIONS:
THE USE OF LARD IN PHTHISIS PULMONALIS..... 113
A NEW PEPTONE FOR SUBCUTANEOUS USE..... 113
EDITORIALS:
THE RELATIONS OF PRACTICAL PHARMACY TO MEDICINE..... 114
ABRUS PRECATORIUS..... 116
NOTES FROM SPECIAL CORRESPONDENTS:
BERLIN LETTER..... 117
RICHMOND LETTER..... 119
NEW YORK LETTER..... 122
REVIEWS AND BOOK NOTICES:
A REFERENCE HAND-BOOK OF THE MEDICAL SCIENCES. Edited by Albert H. Buck, M.D. Vol. V. Wm. Wood & Co., 1887..... 124
DISEASES OF THE FEMALE MAMMARY GLANDS. By Th. Billroth, M.D., of Vienna; and NEW GROWTHS OF THE UTERUS. By A. Gusserow, M. D., of Berlin. Vol. IX of "the Cyclopædia of Obstetrics and Gynæcology." Wm. Wood & Co., New York, 1887..... 124
ELEMENTS OF BOTANY. By Edson S. Bastin, A.M., F.R.M.S. Chicago, G. P. Engelhard & Co., 1887.. 124
A COMPEND OF THE PRACTICE OF MEDICINE. By Dan'l E. Hughes, M.D. Physician's Edition. P. Blakiston, Son & Co., 1887..... 124
THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES..... 124
LETTERS TO THE EDITORS:
ON THE ETIOLOGY OF ELEPHANTIASIS ARABUM. By W. X. Sudduth, M.D., of Philadelphia..... 125
MISCELLANY:
IS INSANITY ON THE INCREASE?..... 127
Official List of Changes of Stations in the U.S. Army, U. S. Navy, and Marine Hospital Departments... 127
PUBLISHER'S DEPARTMENT:
Items of Interest will be found on pages v, xii, xx, xxviii and xxix, of the Advertiser.



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## ADDRESS.

### THE PHYSICIAN IN LETTERS.

Read before the American Academy of Medicine, at its Meeting in Washington, September 3d, 1887,


BY BENJAMIN LEE, A.M., M.D., PH.D.,
Of Philadelphia.


IT is now thirty years since a medical society, composed entirely of students connected with one of the medical colleges in the city of New York, met to celebrate its first anniversary. The orator of the evening—for, of course, nothing less than an oration would satisfy the dignity of the occasion—was he who now addresses you. These thirty years—how full of events have they been! Did ever another generation in another country crowd into its narrow limits so much that was grand, so much that was awful, so much that was agonizing, so much that was inspiring, stimulating, uplifting? These thirty years have silvered his head and furrowed his brow, and it would be to his shame had they not in many respects modified his opinions. But the message which he felt constrained to deliver to his fellow-neophytes at the outset of their careers is still the burden of his vision; and in glancing over the old manuscript (which had lately come to light) he found in its yellow, time-stained pages and faded characters so little to regret and so much to commend that he has ventured to reproduce its thoughts almost in their original garb. The subject was: "The Connection existing between Medical Literature and that of the Other Professions and General Literature;" and it was handled much as follows:

It is highly important to the physician, if he wishes to obtain celebrity in his profession, or if he desires to acquire a wide influence for the nobler purpose of extensive usefulness, that he should be not merely what his diploma styles and makes him,—*Medicinæ Doctor*, an expert in medicine,—but that he should also cultivate a thorough acquaintance with all the branches of a polite education; that he should be familiar with the current literature of the day, and know something of that of the other professions and sciences; that he should be "a scholar, and a rich and ripe one."

Other things being equal, the most agreeable man in society will be the most successful and popular practitioner; and the most agreeable man is he who best understands how to accommodate both the matter and the manner of his conversation to the calibre, tastes, modes of thought and intelligence of his interlocutor. No man of ordinary sense would introduce as a probably pleasing topic to a clergyman, the theatre or race-course, or treat a gay girl in a ball room to a deep disquisition on

theology or political economy. But many who would avoid these naked rocks in the sea of social intercourse might strand on the shoals of ignorance,—at a loss to know what subjects to introduce under such differing circumstances or incapable of intelligent conversation on appropriate topics. Such men will always be at a disadvantage in the struggle for popular favor. If the physician aspires to be a medical author, he will find that familiarity with the writings of standard authors on other subjects will lend him greater facility in treating of those connected with his profession. He thus obtains an ease of manner, a clearness of diction, and an elegance of expression attainable in no other way; while, at the same time, he is laying up a vast store of information on which to draw for purposes of example and illustration. His powers of reasoning will be greatly improved and energized by the perusal of logical discussions in non-medical works. Even at the bedside he will find himself able to array his ideas in more accurate lines and arrive at his conclusions with greater readiness and precision as a result of such mental discipline. Aside from these advantages, complete change and divergence of the current of his thoughts will afford a respite from the constant harassing cares of the profession more refreshing even than complete rest; and he will return to the consideration of his professional problems better able to solve their intricacies and penetrate their depths in consequence of the improvement in his mental tone. A daily habit of such relaxation will become, like his recess to the schoolboy, a period of intense enjoyment; all the more delightful because hedged in on either side by labor.

To this cultivation of the love for and appreciation of all literature, and to the consequent habits of thought and beauties of style were owing—I think it can scarcely admit of a doubt—in great measure, the reputation enjoyed by the medical practitioners of the city of Philadelphia and the immense success of her medical schools during the early part of this century. What was there to account for it if not the rich and ripe scholarship of the Bonds, the Wistars, the Rushes, the Physicks, the Cadwaladers, and others whose names are no less revered: a scholarship which made itself apparent in every sentence they penned and every word they uttered. Was Philadelphia so much larger than her sister cities? Were her hospitals so much more numerous, her dispensaries so much more crowded? We know that, on the contrary, material for clinical study existed in greater abundance elsewhere. Works were constantly issuing from the medical press of that city characterized not only by deep research and close observation, but by an ease and beauty of style and cogency of reasoning which could only have been acquired by familiarity with authors whose works are not found on the shelves of the medical library, and by a studied cultivation of all the available powers of the mind. These characteristics rendered them interesting even to the unprofessional reader,—deeply fascinating to the student of medicine.

But it is not only of the advantages to the physician, in whatever aspect of his life, of an acquaintance with general literature that I would speak, but of the opportunities which present themselves for distinguishing himself in the field of letters. The peculiarly harassing nature of his duties, the many calls upon his time, the impossibility of obtaining a quiet and uninterrupted hour, the broken rest and irregular routine are all, it must be confessed, highly inimical to that tranquil, undisturbed condition of the mental powers which is perhaps most favorable to the work of composition. But aside from this, it must be admitted that he enjoys certain opportunities in the line of his daily observation, and essential habits of thought which are not possessed by members of other professions.

It is not to be expected that he should shine as an author of theological tomes, and yet from the time when the beloved physician penned his former and his latter treatises down through the "*Religio Medici*" to the appearance of "Rab and his Friends," physicians have not been wanting who could wield the sword of theological controversy,

or administer the balm of sweet religious contemplation.

Of law, the medical man has been, until of recent years, too profoundly ignorant. He has had an indefinite idea that the principal function of the Goddess of Justice was to maintain a system by virtue of which he was liable at any moment to be interrupted in the round of his daily duties, dragged *nolens volens* before a judge, in a very bad-smelling court-room, questioned and cross-questioned by bullying lawyers until he feared to swear to his own identity, unmercifully snubbed, and dismissed with a reprimand for contempt of court. Or, possibly, he may have made her acquaintance through the medium of a suit for malpractice, because, forsooth, he did not succeed in reversing the decrees of Divine Providence, or turning back the wheels of nature. A better day, however, has dawned, and lawyers now sit at the feet of doctors-in-medicine to learn the principles of Medical Jurisprudence. The intricate interweaving of the two professions is every day becoming more thoroughly recognized and affording a wider field, not so much for investigation as for formulation, codification and adjustment.

In the domain of the natural sciences, the physician holds a decided vantage-ground. His necessary acquaintance with anatomy, comparative as well as human; with botany; with chemistry, organic and inorganic; and with the climatic peculiarities of different regions, place him in a position to acquire, with very little additional labor, an accurate knowledge of those branches of natural philosophy with which his own science is more or less intimately connected—of chemistry, for example, in its more extended application to mineralogy and geology, of natural history, and of physical geography. Not only has he been grounded in the elements of these sciences, but he has acquired just those habits of thought and methods of investigation which are necessary to their successful cultivation.

On the other hand, his practical knowledge of the workings of the human mind in its least guarded moments, in sickness as well as in health, in poverty as well as in prosperity, in sorrow as well as in joy, not only the "mens sana in corpore sano," but the "mens sana in corpore ægro," and the "mens ægra in corpore sano," make him, in spite of himself, something of a mental philosopher and metaphysician.

I am at a loss to account satisfactorily for his neglect, until comparatively very recent times, of a department of literature which, well occupied, is profitable both to the reputation and the pocket, and for which his daily observation abundantly fits him. I refer to that class of writings in which the exhibition of the emotional side of human nature is the principal aim and of which the novel is the type. Who so capable of telling tales of intense excitement, of heart-rending sorrow, of rapturous joy, as he who, day by day, stands by the couch of some darling object of affection, sees the agonizing solicitude of those who love and watch as the hopes of recovery grow fainter, the breathless intensity of expectation with which they await his opinion, the heart-sickening anguish with which his look of increased anxiety is received, the thrill of delight which follows his announcement that the danger is past? All the wonderful opportunities too afforded by the vagaries of mental disease are at his dispo·al. And yet, with one or two exceptions, all these rich placers have been left unworked.

The connection between Wit and Humor and the medical habit of thought will, I doubt not, be generally considered a rather obscure one, and yet I think I can show that it is real.

The greatest of modern English satirists has demonstrated to us the strong affinity existing between charity and humor—has shown us how the soul that has been induced to smile by some kindly touch of wit, so far from being less favorably disposed toward its race, is all the more ready to listen to the cry of distress and to befriend the friendless; how the sphincter, which closes at the same time the bowels of compassion and the mouth of the purse, is relaxed by the general titillation; how reserve and pride and churlishness are thrown off their guard by the

awakening of mirthful emotions and under their genial influence the unfortunate is pitied, not only from the bottom of the heart, but from that lowest deep of all depths, the bottom of the pocket. Should I fail to make as clear and convincing a demonstration as his, attribute it not to the obscurity of the subject, but the deficiencies of the pleader. Wit and humor—and I shall speak of them together and interchangeably—involve the conception of such a collocation of ideas as is designed to produce mirth or laughter. Now laughter—as we are told by Hobbs, who has dissected the human intellect as carefully and skilfully as any other English metaphysician—can only occur when there is in the mind a sense of its own superiority over some other object which it has in view, or, what is the same thing, of the inferiority of that object to itself. Laughter is the result of this consciousness of another's inferiority. Whatever other element of thought there may be combined with it, this must always be present. This theory derives support from the custom which has prevailed in European courts, from time immemorial, of having idiots at hand under the name of jesters or fools, whose innocent mistakes might arouse this sense of superiority in the minds of the nobles and thus stimulate their risibility and sharpen their wits. Now, if this proposition be granted, I submit that no class of men have so grand an opportunity for the cultivation of the art which shall produce laughter as physicians. In his daily, unrestrained, familiar intercourse with his patients, in his sudden and unexpected incursions, not to say intrusions, at seasons when the least preparation is made to receive strangers, the least pains taken to conceal improprieties or deficiencies, the family doctor must constantly be placed in precisely the position mentioned; namely, one in which his own superiority and another's inferiority, even though temporary and accidental, are glaringly evident. And although he may so school himself that none shall perceive his recognition of the circumstances, though his good breeding and self-command be such that not a smile shall visit his grave face, though professional honor and gentlemanly feeling will ever seal his lips to the mention of them, yet if he be a man of the slightest perception of the ludicrous, such occurrences must attract his notice and afford unfailing means of practice for the development of his laughter-arousing faculty.

Again, Locke tells us that "Wit lies in an assemblage of ideas, and in putting those together with quickness and variety wherein can be found any resemblance or congruity to make up pleasant pictures or agreeable visions in the fancy." Now it is just such an exercise of the mind, with one exception, that the whole education of a physician tends—and designedly—to foster; and that his daily and hourly experience strengthens and stimulates. When he enters the sick-room his whole energies are bent to determine with what form of disease he has to deal. To ascertain this, he calls to his assistance every possible means of diagnosis. He invokes the aid of his every sense; all the subtle variations of the pulse, that trusty index of the heart; the hue of the cheek, whether red with the flush of fever or white with the ashy pallor of exhaustion; the eye, cold and expressionless or brilliant with flashes of unnatural fire; the tongue, as sure an indicator of disease as of character; the respiration, quick, gasping, panting, or slow and labored; the sound of the vital air, as it rushes into all the minute branches of the bronchial tree, making music like the sighing of the summer breeze among the leaves of the forest, or harsh, grating, and unmelodious. All these and many other particulars are noted in rapid succession by the skilful phyician almost by intuition. These are so many ideas, of which he makes an assemblage, putting those together "wherein can be found any resemblance or congruity," although this latter process has become so much a part of his second nature as to require no conscious effort on his part. This, too, he does with "quickness;" for the bedside of a man sick unto death is no place for sluggishness of thought or action. It is the work of an instant with him to collocate the congruous ideas, bringing each into its appropriate place, allowing each its due prominence,

and thus to determine the malady and to propose the remedy. Now I claim that if the subject of this mental process be changed from a painful to a pleasant one, the habit and method of thought will still remain, to be applied just as successfully as before. That the physician may be a wit and humorist we have the most convincing proof in the person of one of our distinguished honorary members, Dr. Oliver Wendell Holmes, with the reading of one of whose delightful little poems, as a final link in my chain of reasoning, I propose to close this somewhat discursive paper:

## THE STETHOSCOPE SONG.

### A PROFESSIONAL BALLAD.

THERE was a young man in Boston town,
He bought him a stethoscope nice and new,
All mounted and finished, and polished down,
With an ivory cap and a stopper too.

It happened a spider within did crawl,
And spun him a web of ample size,
Wherein there chanced one day to fall
A couple of very imprudent flies.

The first was a bottle-fly, big and blue,
The second was smaller, and thin and long;
So there was a concert between the two,
Like an octave flute and a tavern gong.

Now, being from Paris but recently,
This fine young man would show his skill;
And so they gave him, his hand to try,
A hospital patient extremely ill.

Some said that his liver was short of bile,
And some that his heart was over size;
While some kept arguing all the while
He was cram'd with tubercles up to his eyes.

This fine young man, then up stepped he,
And all the doctors made a pause;
Said he,—The man must die, you see,
By the fifty-seventh of Louis' laws.

But, since the case is a desperate one,
To explore his chest it may be well;
For, if he should die and it were not done,
You know the autopsy would not tell.

Then out his stethoscope he took,
And on it placed his curious ear.
Mon Dieu! said he, with a knowing look,
Why here is a sound that's mighty queer!

The bourdonnement is very clear,—
Amphoric buzzing, as I'm alive!
Five doctors took their turn to hear;
Amphoric buzzing said all the five.

There's empyema beyond a doubt;
We'll plunge a trocar in his side.—
The diagnosis was made out;
They tapped the patient; so he died.

Now such as hate new-fashioned toys
Began to look extremely glum;
They said that rattles were made for boys,
And vowed that his buzzing was all a hum.

There was an old lady had long been sick,
And what was the matter none did know;
Her pulse was slow, though her tongue was quick.
To her this knowing youth must go.

So there the nice old lady sat,
With phials and boxes all in a row;
She asked the young doctor what he was at
To thump her and tumble her ruffles so.

Now, when the stethoscope came out,
The flies began to buzz and whizz.—
O ho! the matter is clear. No doubt
An aneurism there plainly is.

The bruit de râpe and the bruit de scie,
And the bruite de diable are all combined.
How happy Bouillaud would be
If he a case like this could find!

Now, when the neighboring doctors found
A case so rare had been descried,
They every one her ribs did pound
In squads of twenty; so she died.

Then six young damsels, slight and frail,
Received this kind young doctor's cares;
They all were getting slim and pale,
And short of breath on mounting stairs.

They all made rhymes with "sighs" and "skies,"
And loathed their puddings and buttered rolls;
And dieted, much to friends' surprise,
On pickles and pencils, and chalk and coals.

So fast their little hearts did bound
The frightened insects buzzed the more;
So over all their chests he found
The râle sifflant and râle sonore.

He shook his head.—There's grave disease;
I greatly fear you all must die.
A slight post mortem, if you please,
Surviving friends would gratify.

The six young damsels wept aloud;
Which so prevailed on six young men
That each his honest love avowed;
Whereat they all got well again.

This poor young man was all aghast;
The price of stethoscopes came down;
And so he was reduced at last
To practice in a country town.

The doctors being very sore,
A stethoscope they did devise
That had a rammer to clear the bore,
With a knob at the end to kill the flies.

Now, use your ears all you that can,
But don't forget to use your eyes,
Or you may be cheated, like this young man,
By a couple of silly, abnormal flies.

## ORIGINAL COMMUNICATIONS.

### ON THE PATHOGENESIS OF YELLOW FEVER.

BY YGNACIO ALVARADO, M.D.,
Delegate from Mexico; Professor of Physiology in the National School of Medicine (Mexico).

[CONTINUED FROM PAGE 68.]

THE reddish, arborescent appearanec of the vessels of the peritoneum, in some cases the fibrillar adhesions between two coils of intestine, and oftener, the presence of a viscid liquid in the peritoneal cavity, constitute the most usual lesions found in the peritoneum. The kidneys are enlarged, hard, and their surface exhibits brown red patches alternating with yellow and naturally colored zones. The hyperæmia sometimes predominates, and the yellowish color in other circumstances. There are very often apoplectic nuclei, and the fatty degeneration, both of its parenchyma and blood-capillaries, are present in many cases; sometimes abrasions of the epithelium have been observed in the pelvis and calices. Fatty degeneration of the heart has been found, the endocardium with whitish patches thicker than the rest of the membrane, these lesions extending to the inner layer of the main arteries, the peri-arterial connective tissue of which is very commonly the site of a sanguineous extravasation all along the arteries; as a consequence, capillary embolism. A greenish or yellowish liquid fills the pericardial cavity, and sometimes whitish patches may be observed on the surface of the membrane. The brain, too, undergoes fatty degeneration, the cavity of the arachnoid containing a great quantity of a reddish serous liquid which infiltrates the cellular tissue, surrounding all the blood-vessels of the pia-mater, which appears as a beautiful, very red net, after the arachnoid has been taken off. Furthermore, the poisoning by phosphoric acid causes the blood to be acid and diffluent, and the same alteration has been found by Griesinger, Davy and La Roche in fatal cases of yellow fever. These are very summarily the lesions in the organs in cases of yellow fever, and when compared with those of phosphoric poisoning one must be impressed with the fact that there is a very essential and tangible feature common to both ailments, viz., a fatty degeneration throughout the body as the last stage of a very acute process of inflammation.

We desire to dwell upon this condition of the organism, because it is the characteristic feature in the pathological anatomy of yellow fever; no particular and unique lesion in special organs, as often happens in other maladies, can be pointed to; the only one, we say again, is a generalized and very severe phlogosis of nearly all the tissues, having a rapid course and ending in fatty degeneration. Such a fact gives a natural and plausible explanation of every symptom of the illness.

We come now to the symptoms, and shall try to show that there are but two natural periods in this illness, such a fact being in accord with our views, namely, one of fermentation, the only one to which the name of yellow fever is properly fitted; and another, which is but the result of lesions arising from the first.

No matter how skilfully the divisions of the course of the malady have been made by other observers, all of them are simply artificial; the main reason of this statement lying in the fact that there are many, many instances in which the different alleged periods of yellow fever are missing. Were they natural periods, none of them would fail to appear in every case.

But among the numberless symptoms of yellow fever there is one that never fails to exist, and this is the changed temperature of the body.

For this reason we have taken the abnormal temperature as the basis for the study of the malady, and have noted the symptoms that accompany each one of the three natural stages of the abnormal heat,—ascent, fastigium and descent,—and the facts observed have led us to the conclusion that all the cases of yellow fever must be included within two classes, those in which the malady ends at the fastigium of the abnormal heat, and convalescence sets in at once, and those in which the illness still goes on through the decline of the abnormal heat.

The symptoms attending the first class are present in every case, and those attending the second are restricted to a certain number of patients. That is, yellow fever has two phases of evolution; the first necessarily exists in all persons attacked by it, the second is present only in some cases.

All patients experiencing only the first, recover, except in case the two periods are indistinct, which occurs in the severest form of the attack. Those who run into the second period have generally a severe attack, proving favorable in some, fatal in others.

Before going into the specifications of the symptoms of each period, let us say that poisoning by lactic acid gives rise to the following symptoms: Sensation of fatigue,* which causes aching all over the body, dizziness, somnolence, and symptoms denoting inflammation of the entire alimentary tract, and in the last stage of the poisoning all those corresponding to the phlogosis of the heart, liver, kidneys, etc.

The following are the symptoms that we have very carefully observed twice a day in about one hundred patients, from 1876 to 1879, at Vera Cruz, while the abnormal heat of the patients was in the ascent and fastigium. For brevity's sake, we shall omit all these details, and also other symptoms which are not closely pertinent to the subject under consideration.

Among the many symptoms attending the invasion of yellow fever, *aching in the limbs and in the arms* has been one of the most prominent, from the very outset of the malady, in 80 per cent. of all patients. This pain has been *spontaneously* compared by the patients themselves with the *sensations experienced after protracted walking;* and as we have been very particular in our queries not being suggestive of the said comparison, we are confident that the character of this aching is certainly that of a tired feeling.

*It must be remembered that lactic acid is normally found in muscles at the time of their contractions, and immediately absorbed by the centripetal vessels; and when it accumulates to such an extent as to make the muscular reaction acid, there always appears then the *feeling of being tired.*

Headache that occurs in 100 per cent. although it has a complex cause,—compression of the cranial nerves by the hyperæmia of their nervous tissue and by that of the adjacent ones, and later on the meningitis,—we are inclined to consider it as having at the earliest period of the malady the same source as the pain in the muscles of the upper and lower extremities, because those causes are not yet present when the pain appears, and because the cause of the headache closely follows the pain of the limbs and arms in 73 per cent. of cases of recovery and in 68 per cent. of fatal cases, both ailments beginning having its maximum and disappearing at the same time, and, furthermore, there is no instance of the muscular pain having appeared alone without being accompanied by the headache.

That particular pain which is located in the muscles of the eye, and increases when the patient is compelled to look upwards, shares the same character. In 88 per cent. of all cases it has been present, and in almost every one, from the earliest period of the illness.

It began at the same time as that in the limb in 88 per cent. of favorable cases, and in 83 per cent. of fatal ones; following its march in 76 per cent. and 56 per cent. respectively. Here are to be applied the same remarks that we have previously made.

Finally, the lumbago—the excruciating pain so frequently present in yellow fever as to deserve to be considered a characteristic symptom—has the same correlation as the *tired feeling* of the limbs.

In 95 per cent. of our patients it has occurred, and in 85 per cent. of them lumbago and pain in the limbs have started at the same time, both following the same course; that is to say, increasing and decreasing together, and disappearing at the same time.

There is, later on, in the course of the illness, hyperæmia and inflammation of of the kidneys, and such a thing must account for the absence of the correlation between the two ailments in all cases.

It is to be seen by these abstracts from our observations, that a unique and general circumstance is the starting cause of all the aching present at

the onset of the malady. There are but two general conditions of the body capable of producing these, namely, the abnormal heat and the pathological condition of the blood.

The first cannot be accepted, because although in every instance abnormal temperature and general aching have begun at the same time, they have followed afterwards a diverse course in 69 per cent. of patients who recovered, and in 94 per cent. of those who died. Thus, the correlation of cause to effect is not reasonably presumed here, and consequently the general condition of the blood is to be taken as its cause.

Lactic acid poisoning gives rise to a general phlogosis throughout the digestive canal, and this happens as well in yellow fever from the earliest hours of the malady. In all our cases the gums have been noticed, a very few hours after the beginning of the illness, swollen, more or less reddish, lined with a whitish layer of oidium albicans, and later on, ulcers on the free edges have appeared. The inflammation of the stomach, evinced either by pain, nausea, or vomiting, never failed to exist. Aching of the viscera, increased by pressure on the place, movements of the patients, even by the weight of the bed covers, and by the ingestion of liquids, has been observed in every instance of fatal cases, and in 93 per cent. of patients who recovered. Nausea always attended the illness from its start; and vomiting, either mucous, bilious or black, has been noted in 86 per cent. of cases which recovered, and in 98 per cent. of patients who died.

Dizziness and somnolence, which are among the morbid phenomena accompanying lactic poisoning, are the usual attendants of yellow fever, the former having occurred in all cases and in 90 per cent. of them at the outset of the illness; and the latter, although not so frequent, being present in 53 per cent. of cases of recovery, and in 93 per cent. of patients who die, appearing later than the dizziness. There is no patient, be the character of their disease what it may, either mild, severe, or fatal, who fails to show on the whole, during the ascent and acme of the abnormal heat, besides other symptoms, inflammation of the gums, pharynx, stomach and intestines, feeling of being tired, headache, pain in the eyes, lumbago, dizziness and somnolence; and it is to be remembered that identical symptoms are noted in cases of lactic acid poisoning. We have stated before that when the abnormal heat has reached its maximum and begins its third stage—the descent—the yellow fever will either be definitely ended, or the symptoms will still continue to go on and some new ones will appear, although there is no abnormal heat; that in the first case there is but one period, the fermentation which always exists in every instance of yellow fever, and in the second case the consecutive period sets forth, which, according to our hypothesis, will be a case of poisoning, either by phosphoglyceric acid, or by acid phosphate of soda.

Do the symptoms observed in the consecutive stage of yellow fever correspond to those of phosphoric poisoning? We are inclined to believe that such is the case, because the latter symptoms are those of an acute inflammation of the digestive tract, liver, kidneys, heart, and in general of all the tissues ending in fatty degeneration; and we have seen that such is the characteristic feature of yellow fever, and shall show besides that the symptoms present during the consecutive stage reveal that although there was already a phlogosic condition of the main organs, this had been aggravated at the time the pathological temperature began to subside, which fact would not have happened were it not for the presence of a new cause. The symptoms revealing an increase of the inflammation of the different parts of the alimentary canal in that circumstance, in our observations have been noticed as follows: recrudescence of redness and swelling of the gums, in 7 per cent. of cases of recovery, and in 52 per cent. of fatal cases; and of the stomach-ache 33 and 79 respectively; bilious vomiting, 53 and 45 per cent. respectively. Furthermore, the black vomit which evinces either ulceration, the advance stage of phlogosis, or decomposition of the blood, or both, as it is the most usual case, has been scarce in patients who recovered, and when it occurred made

its appearance during the acme of the abnormal heat in 20 per cent., and during the descent in 80 per cent.; in fatal cases 40 and 57 per cent., have been respectively the figures. The most repeated and abundant instances of black vomit occurred in 50 per cent. of cases of recovery, and in 58 per cent. of fatal cases, in the said period of descent of the abnormal heat. An increase of the nephritis is noticed by the recrudescence of the renal pain, or by the augmentation of the quantity of albumen in the urine. The former took place during the descent of the abnormal heat in 19 per cent. of patients who recovered, and in 51 per cent. of those who died, and the latter in 45 and 71 per cent. respectively.

Delirium, as one of the ushering-in symptoms of meningo-encephalitis, has failed to be present during the illness in 72 per cent. of successful cases, and existed in 93 per cent. of fatal cases; and when it so happens, its increase took place while the heat went on subsiding, in 33 and 86 per cent. respectively. Coma, that attends an advanced degree of phosphoric poisoning, was in yellow fever of a very rare occurrence in mild cases, and in fatal ones, always appeared, as the rule, in 0.09 excepted, while the heat was decreasing.

We regret not to have always paid attention to the symptoms revealing the angio-cardiac phlogosis,—pain and murmur,—and in the cases we did, (16) its maximum accompanied the maximum of the cerebral and nephritic complaints.

It is to be seen, therefore, by the foregoing figures, that in severe and fatal cases of yellow fever, the phlegmasis of the diverse organs undergo a recrudescence, and some others begin to be inflamed, after the abnormal heat has begun to subside, which fact can be ascribed but to the presence of a new agent acting like lactic acid. Such a condition can be fulfilled but by a phosphoric compound.

If our opinions are correct, then the experimental poisoning in animals, by lactic and phosphoglyceric acid, will reproduce to a certain extent the main symptoms and lesions accompanying yellow fever. With this object in view, we undertook a series of systematic experiments, which personal circumstances compelled us soon to give up. Although very incomplete, some of them are appended here, which will add some more probabilities to the proposed theory.

We made in some dogs hypodermic injections of two grains of phosphoglyceric acid in one gramme of water, without noticing any abnormal phenomena. In some others an intravenous injection of 20 centigrammes of lecythine, prepared from the yolk of eggs, dissolved in 1.50 grammes of sulphuric ether; and in some others the quantity of lecythine being ten drops to ten drops of ether, and in both cases with negative results; except in the latter cases, in which an abundant salivation and lachrymation immediately ensued upon the injection. In another dog, 1 gramme of lactic acid, diluted with 1 gramme of water, was followed by no particular phenomenon during the eight subsequent days. We then have injected into the jugular vein of a small-sized dog 0.50 of lecythine, and immediately after 0.50 of lactic acid. Up to 9 P. M.—the injection was made at noon—no particular symptoms were observed, and at about 3 A. M. on the following day the dog was dead.

At noon a post-mortem examination showed the following—there was on the ground a natural stool; no vomited matter. Cadaveric rigidity very exaggerated; liver hyperæmic, natural consistency; red-brown hue; volume a little increased; stomach completely emptied, its mucous membrane swollen and of a dark, rosy color; red ecchymotic patches in the duodenum, which was filled with yellow bile; and in the rest of the small intestines, yellow and abundant bile also, either alone or coloring an abundant mucous matter. Kidneys congested, bladder emptied, and its mucous membrane dry. Heart of natural size, and its four cavities filled with a very dark blood, the consistency of which was a little greater than, but closely resembling, gummy syrup; no signs of endocarditis; reddish-yellow and swollen patch in the transverse portion of the aortic arch; nothing particular in the carotids. Brain very much congested; its pia

mater of a very vivid red hue, and all its capillary vessels enlarged and very numerous; nothing particular in the arachnoid. It is clear that death was a consequence of the conjoint presence of lecythine and lactic acid, as other experiments have shown that neither of them, when alone, have killed the animal; which fact supports, to a certain extent, our hypothesis that the lesions at the post-mortem examination were of a phlegmasic character, as is also clear as regards the mucous membrane of the stomach, the small intestines and a portion of the aorta, and are very presumable for the brain, kidneys and liver. As in yellow fever, the urine was suppressed, the blood has the same aspect, and the cadaveric rigidity was as marked as it is in vomito negro.

We, having been led to think that lecythine extracted from the blood would be better suited for the purpose than that from eggs, made the following experiment:

Rabbit, of large size, respiration, pulse and pupil normal, rectal temperature 40.1° (Cent.), gums of a vivid rosy color, palpebral conjunctiva red, ocular conjunctiva normal.

August 29th, 12.30 P. M.—hypodermic injection in the right side of 0.004 of sheep's blood lecythine, dissolved in 1.5 of sulphuric ether.

12.35—temperature 40°, slight anæsthesia; respiration and pulse normal; pupil enlarged.

12.45—temperature 39.7°, profound anæsthesia; pupil very much enlarged, pulse and respiration normal.

12.55—temperature 39°, anæsthesia the same.

1.5—temperature 39°, pupil smaller.

1.15—temperature 38.7°, slight anæsthesia, spontaneous movements; he tries successfully to walk; pupil the same.

2.15—temperature 37.6°, anæsthesia disappeared; pupil, pulse and respiration normal; appears depressed.

3.30—temperature 37.1°.

5.45—same.

8.15—temperature 39.1°, gums of a vivid rosy color.

August 30th, 8.30 A. M., temperature 38.1°, ocular conjunctiva yellowish; gums redder than yesterday; depressed.

8.30 P. M.—temperature 37.4°, increased depression.

August 31st, 7 A. M.—The rabbit lies dead on his right side, cadaveric rigidity (opisthotonos) very marked. Around the puncture made with the syringe, the subcutaneous cellular tissue was red, and a greenish liquid permeated it to a great extent around. Mesentery red and the vessels filled with blood, and in some places small ecchymoses appeared. Stomach considerably enlarged by very dry food, and so was the mucous membrane of the viscera, from which large portions of its epithelium can be washed off by a light stream of water; no change in the color of the said mucous membrane, except at the level of its small curvation, where there is a patch of red hue; nothing particular in the intestines. Liver very congested, showing very numerous red dots; its consistence and size about normal; the gall-bladder very much distended by bile; kidneys somewhat enlarged and dark; the bladder contained 45 grammes of urine, which, after being filtered, was transparent, greenish, and the nitric acid test revealed the presence of a small quantity of bile, and a great deal of albumen. Lungs of a vivid rosy color. In the pericardium there was one gramme of a greenish liquid, in which no trace of bile could be detected by nitric acid. Brain very much congested, and so was the pia mater in a greater degree, the capillaries of which appeared very red and numerous, owing to being filled with blood.

The above experiments show that after introduction of lecythine into the blood, the temperature fell, jaundice and albuminuria set in, inflammation of the stomach, peritoneum, liver, and pia mater appeared in a very short time, and ecchymoses are produced, as happens in the consecutive stage of yellow fever.

In summing up, we believe the deduction is warranted from all that has been stated in this paper, that there is circumstantial evidence in favor of the opinion proffered by us, namely: That during the ascent and acme of the abnormal heat in yellow fever, a true fermentation takes place through the presence of a micro-organism in the blood,

which takes the oxygen of the sugar for its own nourishment, and the other elements of the sugar are turned into lactic acid, and hence the symptoms attending this first stage of yellow fever. That in case the fermentation has not attained a certain degree, the malady will have favorable issue at the end of the fastigium of the abnormal heat.

That in the contrary case, the lactic acid will cause the phosphoglyceric acid to be set free from the lecythine of the blood, and there will be then a *consecutive* period accompanied by all the symptoms attending phosphoric acid poisoning; and finally, that when death ensues, the cadaveric lesions will be those caused by fatal intoxication with phosphoric acid, viz: generalized phlogosis throughout the body, causing fatty degeneration of the viscera.

We confidently hope that persons interested in the advancement of science, and conversant with practical chemistry, will take this matter into their hands, and, by skilful analysis of the blood, arrive at data by which they will be able either to reverse or affirm our opinion.

## ABSTRACT OF PRESIDENT'S ADDRESS READY BEFORE THE AMERICAN PUBLIC HEALTH ASSOCIATION.

BY G. M. STERNBERG, M D.,
Major and Surgeon, U. S. A.

[The following points of interest and importance were brought out by Dr. Sternberg last week in his Address as President of the American Public Health Association.]

THE creation of a central health authority, under the direction of a cabinet officer, and having powers somewhat equivalent to those of the Commissioners of Education and Agriculture is desirable. This central authority should be one man, and not a board composed of members from different sections of the country. The latter, as was shown by the defunct National Board of Health, is cumbersome; and, being assembled only at long intervals, cannot act as promptly or efficiently as a single responsible head located at Washington. A board composed of the chief medical officers of the army, navy, and marine hospital services would be little better than the board which has been tried and failed to succeed.

The "Bureau of Public Health" should have a commissioner at its head and the necessary secretaries and clerical force to make it efficient. It should control a well-equipped laboratory, in which bacteriologists, chemists, and sanitary engineers should be engaged in the experimental investigation of unsettled sanitary problems: such as the natural history of disease-germs; the best methods of destroying them; protective inoculations against infectious diseases; the disposal of sewage; domestic sanitation; food-adulteration; and a number of other questions of similar importance.

While the good to be accomplished would depend largely upon the fitness of the man to be selected, we may trust the good judgment of the Chief Executive to make the proper appointment.

In connection with the Bureau of Public Health, there should be an Advisory Health Board, to be composed of the Surgeons-General of the Army, Navy, and Marine Hospital service and the Presidents of State Boards of Health. To this board could be referred questions for consideration, or it could suggest new measures and changes in regulations.

The question whether it is practicable to make a city, which lies within the area subject to invasion, proof against epidemics of yellow fever and cholera is of great importance. The prevailing opinion of English sanitarians is that it is practicable, and that quarantine restrictions are unnecessary. At the International Sanitary Conference of Rome, the English delegate exhibited statistics to show that, in spite of the free and unrestricted commercial intercourse between Great Britain and India, cholera did not gain entrance into the former on account of the sanitary condition of the seaports. The method adopted in England is stated by Dr. Thorne to be as follows: The customs officers board arriving vessels, and at once communicate to the sanitary authority the occurrence of any case of cholera, choleraic diarrhœa, or suspected cholera. A vessel so infected is detained until the medical

officer has examined the crew and passengers. Those sick are removed to the port-hospital, and suspected cases are detained for a period not exceeding two days. The sick are isolated, but the healthy are allowed to proceed; but their names and destinations are at once notified to the sanitary authorities at their points of destination. The sanitary authorities throughout the kingdom are constantly on the watch and active in promoting the sanitary condition of the districts under their charge. To this the exemption of England from cholera is attributed by Dr. Thorne.

In this country it would not be pru dent to adopt the English method at present. The system in use at the port of New Orleans is in accord with modern sanitary principles.

The practice of taxing commerce for the support of quarantine establishments is wrong in principle and unjust to those who are required to bear the burden. The people who are protected should pay the cost of protection, and quarantine establishments should be supported at the expense of the National Government or of the States in which seaports are located, and not by a tax upon the shipping entering these ports.

The following illustration of the evils arising from the present system of supporting quarantine establishments was cited. It occurred at the port of New York. The speaker said: "With the deputy health officer, who boarded our ship, came a man with a jug. I was informed by one of the officers of the ship that he was to disinfect the vessel. Being somewhat curious to know the method of disinfection employed, I asked the ship's surgeon to go with me to inspect, when, after a detention of less than one hour, we had started from the quarantine station for our wharf. We found that the man with the jug had lowered a bucket by means of a rope through one of the hatches between decks. Upon pulling up this bucket, I found that it contained two or three pounds of some powder which had been wet, probably with an acid solution, and which gave off an odor of chlorine. No doubt, when first lowered between decks, there had been a considerable evolution of chlorine; but in the vast space to be disinfected it was so diluted that, at the end of an hour, I did not detect the odor of chlorine-gas when I lifted the hatch, and it was only by approaching my nose to the bucket that I was able to ascertain what disinfectant had been used. The most curious part of the story is that I was informed that the bucket had been lowered between decks to disinfect a quantity of hides which were stored in the hold. What was the object of this 'disinfection?' Evidently not to disinfect; for no one at the present day would think of maintaining that the hides in the hold had been disinfected by the procedure of the man with the jug."

We should set an example to other nations by an enlightened policy, which will not only redound to our credit, but will directly benefit our languishing commerce.

## A SERIOUS DEFECT IN THERAPEUTIC LITERATURE.*

BY MARY WILLITS, A.M., M.D.,
Philadelphia, Penn.

I WISH to call the attention of physicians to the necessity of being more explicit in their writings in regard to the administration of drugs. Holding a position in the Woman's Medical College of Pennsylvania brings me into constant contact with students and recent graduates, and I hear many complaints of the carelessness, or thoughtlessness, of prominent men in reporting cases either in journals or societies. When speaking of the treatment, the *name* of the drug used is given, rarely anything more; nothing in regard to its dose, frequency of administration, or length of time it should be continued. This applies not only to a drug which has been in use for some time, and with the action of which we are supposed to be acquainted, but even to a new remedy with which many of us are not familiar. We have never used it or known of a case where it has been used. We are interested in its effects in the case reported; but are entirely at a loss

*Read before the Philadelphia Clinical Society, September 23, 1887.

as to how to administer it if we should wish to do so.

Often we are left in doubt regarding the form of the drug, whether liquid or solid; if the latter, whether or not it is soluble; we have no idea how to make the dose palatable, or whether it is already so; and all must admit that this is an important factor in prescribing, especially when practicing among children. Take Salol, for example, the drug of which so much has been written during the summer, how many of us have a definite idea in regard to the best method of administering it? In one journal, where I saw an article relating to it, it was recommended in pyelitis and cystitis, also in old ulcers of the leg, applied externally in the latter instance. Some further remarks were made concerning the remedy and then, "It has also been employed in eczema, pruritus, pediculi, scabies, etc.," presumably an external application is to be made for these last named affections, but we are not told so; nor are we told anything in regard to the strength or frequency of the application, if one is to be made, nor what its effects may be; all most important items when we know nothing of the action of a remedy.

The same may be said of numerous other drugs, which are continually being brought to notice; many of them having but a brief career before they sink into oblivion; very few standing the test of time. May not this quick sinking into obscurity, on the part of such a number, be due to this omission on the part of those who report the use of them?

It has not been many years since Quebracho was a new remedy and lauded in high terms for asthma and bronchial affections; but some time elapsed before we were able to ascertain how it was prepared, what amount or with what frequency it should be administered.

Paraldehyde, antipyrin, cocaine and others, which we are now using with so much benefit in many instances, in their early days were subjected to the same unsatisfactory notice.

In the case of old drugs the omission is almost equally grave; every one has his own method of administration. After some years of experience with remedies, he learns that certain doses and certain preparations act best for him, and he employs them accordingly, giving the dose as frequently as he has found necessary. He reports an interesting case in which he speaks of the efficacy of a certain drug. Some physician reads the article, has a similar case, uses the same remedy, but not in the same manner, nor the same preparations; the result is unsatisfactory, and the remedy is discontinued, while the author of the article is condemned, either as having misrepresented the nature of the disease, or as having exaggerated the efficacy of the drug. In some instances a drug should be given until a certain effect is produced, regardless of quantity; the reporter of a case should be careful to state whether he prescribed in that way, or whether a dose, as specified by our writers on therapeutics, was given.

In a well known medical journal a few weeks back, there is a note from a "constant reader," who asks that an article may be written on hypodermic medication, telling *how* to prepare drugs for administration by that method, adding that the dose is so rarely given when the remedy is to be administered hypodermically. I think we can make the assertion more sweeping, and say that it is rarely given at all, for administration in any form, or by any method.

Frequently, the writer will say that a "full dose" of some drug was given; in consulting works on Materia Medica, we find that different authorities on the subject differ in regard to the dose in many cases, so that a "full dose" conveys but little meaning to us. Then, too, there are persons who are very susceptible to medicine and can take but small doses, large ones affecting them most unpleasantly. Take morphine or atropine, we know that most unpleasant results may occur if we give a "full dose" of either to certain persons, and without having some previous knowledge of our patient as to whether or not there may be an idiosyncrasy for certain drugs, it is necessary for care to be exercised in the administration of any powerful remedy.

A frequent error in medical works, which are used as books of reference

and text-books for students, is that under the head of "Treatment" of disease, will be a long list of remedies which have proved efficacious in the hands of one or more practitioners who have used them; perhaps one drug has proved beneficial at one stage of the disease, another at another stage; nothing is said in regard to that; they are all put down in one long list, no mention being made of the dose or preparation which was used. As each drug may have several different preparations, and each of these several different doses, the recent graduate cannot help but grow perplexed and bewildered as he attempts to study up a case, and either wish that our cases were more like those reported, or that books were written for young practitioners instead of for those who have had years of experience in the profession.

He resolves that, by and by, he will write a book which will settle many mooted points and be a comfort to recent graduates, for it shall contain all possible information in regard to the use of the any and every drug to be found in, or out of, the Pharmacopœia; but, as time passes on, he gains experience and confidence in himself, and by the time he begins to write he has forgotten these early annoyances, and follows in the footsteps of his predecessors.

The same mistake is made by writers on electro-therapeutics. We read an article extolling the merits of this method of treatment for certain maladies, but are frequently left in total ignorance as to the kind of current—Galvanic or Faradic—its strength, length or frequency of séances, or on what parts of the body the electrodes are to be applied. Not long ago I saw an article in regard to the use of electricity. A number of cases were cited, in which it had proved very beneficial; among them was mentioned a case of chronic ulcer of the tongue; immediately following that, indeed in the same paragraph, its efficacy in a case of leg ulcer was spoken of—nothing was said in regard to its manner of application in either case, leaving us to infer that the electrodes were placed upon the same parts of the body for these widely separated troubles, and that the séances were of the same frequency and duration.

When speaking of treatment by this method, the amount used at a séance should be specified, either as measured by the galvanometre or milliampère metre; or if no notice were taken of the amount, as measured by one of these, and a current regulated by the toleration of the patient was used, let us be told whether it were as strong as could be endured, or whether merely a pleasant sensation of warmth was produced.

There are several reasons for this too frequent omission. The most prominent is that when speaking of remedies which have been in use for some time, the physician considers it useless to mention a subject with which all should be familiar, forgetting that we know nothing about the manner in which the drug was administered in that particular case, and not realizing that therein may have been the secret of his success. Some persons get into a careless habit of thinking and writing, doing both hurriedly, leaving out important items when reporting cases, doses among the rest. At times it is only an abstract of the original article that we see; the person making said abstract not going into details at all, merely stating that a certain remedy has been used in a certain disease, occasionally neglecting to inform us where we may find the original article, which, perhaps, gives all the important data.

If physicians would only realize of how much more importance their articles would be if this omission were corrected, I think they would be more particular when reporting cases. To those who have had great experience in the use of drugs and electricity, this neglect does not make so much difference. Experience has taught them, to a certain extent, how to prescribe, though even in these cases it would be much more convenient if the writer would state his peculiar method.

The students and recent graduates, who should be especially benefited by these reports, gain but little from them; for it takes time and experience to learn to reason calmly concerning the manner of administering medicine, and a person who has just left college has not acquired either.

## HOSPITAL NOTES.

### UNIVERSITY OF THE CITY OF NEW YORK.

SERVICE OF WESLEY M. CARPENTER, M. D.,
Clinical Professor of Medicine in the University of the City of New York.

#### CLINICAL REMARKS ON WASHING OUT THE THE STOMACH, IN DILATED STOMACH.

GENTLEMEN: We have before us to-day a man somewhat over fifty years of age, who for some time has vomited almost daily large quantities of hot, acrid fluid. He is suffering from what has been called *pyrosis*, and has tried a great variety of treatment without permanent benefit. We propose to give him an opportunity to receive the benefit which may follow washing out his stomach, what the French call *lavage*. For this purpose we might use the stomach-pump, but the method has been very much simplified by the use of a soft rubber tube, from three-eighths to half an inch in diameter, and about two feet and a half in length. At the distal extremity, near the tip, are two openings, one upon each side, for the entrance of the fluid into the stomach. The other end is joined by the intervention of a short glass tube to another rubber tube, about two feet long, to which is attached a funnel for the reception of the fluid to be injected. The connecting piece of glass tube is used for convenience, as through it we can see whether the fluid is passing in freely. The funnel in this case is made of hard rubber, and is less likely to break than if made of brittle material. But the glass funnel has the advantage that the operator can see how much fluid it contains without looking over the top of it.

*Introduction of the Tube.*—Let the patient sit squarely in front of you. At one side place a vessel for the reception of the ejected fluid. Upon a table at your right place the fluid to be thrown into the stomach. Then direct the patient to open his mouth, introduce your finger and depress his tongue, and with the other hand introduce the tube, which you have previously lubricated with vaseline, in the same way you would introduce a flexible catheter into the male bladder. Occasionally you will meet with cases in which the throat is so sensitive that you will be obliged, in order to carry out this procedure, to resort to certain measures to allay that irritability. These, however, are not very common, and we will speak of them later. Generally the patient will hesitate at first, and he may offer some resistance, but on assuring him that he will receive no harm you will be able to introduce the tube without serious difficulty. As in the introduction of the catheter into the male urethra, you will at places meet with resistance as if a stricture had been encountered, so in passing the tube through the œsophagus, the muscles will here and there contract and offer resistance. But, when the tube is thus arrested, wait a moment, give the patient a word of assurance, tell him to swallow, and you will find that the instrument will soon pass along for considerable distance before it is again grasped by the muscles. You will hereafter learn, if you have not already done so, that frequently as the catheter enters the urethra resistance is offered, and you have to wait a moment—never hurry, never push—for the weight of the silver catheter to gently overcome the temporary obstacle and pass on into the bladder. In this respect the analogy between the introduction of the tube into the stomach and into the bladder is quite marked. You may be detained once or twice, or three or four times, before the instrument reaches the stomach. If you should meet with absolute failure in the introduction of the tube, remember that it is one of those accidents to which we are all liable, and be not discouraged. If the failure be due to any error on your part the lesson will be one which you will not readily forget. He who fails to answer a question at his final examination for his degree will remember that question even though he forget all the others.

You may find some of your patients, in family practice, less submissive to treatment of this kind than are others. As some people will go abroad, spend hundreds of dollars at watering places, and do things to which they would not submit should their family physician suggest them, the very fact of their

being away from home, of paying out money for board and professional advice, for railroad fare, for baths, and so on, will frequently induce them to yield to a plan of treatment against which they would rebel if it were advised at home. [The stomach tube was then introduced.]

Our patient, as you have seen, gagged and offered some resistance to the passage of the tube down his œsophagus; the muscles of the pharynx were unusually resistant, but by gentleness, and waiting a moment here and there for the spasm of the muscles to yield, we were able to pass the tube into his stomach. But he found the sensation so disagreeable, and the desire to vomit so strong, that he could not retain the tube sufficiently long to allow us to pour the water into his stomach and wash it out. But he assures you that the operation was not painful, and it is not unlikely that he will submit to it again at our next clinic. His tongue and the muscles of deglutition were exceedingly resistant. There are persons in whom the tongue drops with the slightest amount of pressure, and you will be able to introduce the tube with scarcely any obstruction.

To complete the operation, having introduced the tube into the stomach, pour warm water through this funnel, which should be elevated and kept half or two-thirds full, in order that the current may be continuous. The quantity of water required will vary from a pint to a quart; seldom more than a quart. When the required quantity has entered the stomach you can compress the soft tube between the thumb and finger just at the attachment to the funnel, then lower the funnel to a point below the level of the stomach, and let the fluid run out by siphon action.

A few words with regard to the indications for washing out the stomach. For the most part it is used in cases of chronic gastric catarrh, with free secretion of mucus, especially with acid eructations, a burning sensation and the symptoms of chronic dyspepsia. It is also applicable in cases of dilatation of the stomach. Dilatation sometimes exists to a marked extent, the patient will take food and drink, which will be only partially digested, and it remains in the stomach and undergoes fermentation. These patients often ingest things which tend to combat the process of fermentation. For instance, I know one patient who at one time ate large quantities of sweet flag, and recently he has taken to eating large quantities of cloves; in that way he combats the fermentative process to such an extent that he is able to retain the contents of his stomach two or three days. Then he has a great time vomiting offensive material. You will find that such patients will respond to this mode of treatment.

The washing may be repeated daily, but in most cases it will not be required oftener than every third day or once a week. The fluid used may be simple warm water, or it may be medicated with alkalies or antiseptics.

The washing should be done when the stomach is empty, either before meals or sometime after, and first with warm water, to be followed by half a pint of medicated fluid, or less, which is allowed to remain if medicated fluid is needed.

If the patient's throat becomes so rebellious that you cannot get the tube down, and you think the case is one that renders washing out desirable, there are certain things which you can do to overcome the sensitiveness. The bromides may be administered internally, as for preparatory treatment, and they may also be used locally in solution with a hand atomizer. The throat may be sprayed with a two or four per cent. solution of the hydrochlorate of cocaine, for the same purpose, about fifteen minutes before the attempt is made to introduce the tube. Some patients, however, are afraid of cocaine, having heard that it may be injurious. There is occasionally a case in which unpleasant symptoms, such as syncope and apparent cessation of the heart's action arise from the influence of cocaine when administered in the throat or anywhere about the neck and face. Why this occurs has not yet been satisfactorily explained, but the fact should interest us; we can theorize concerning it at our leisure. I have recently encountered a case in which the spray of cocaine in the throat and nasal passages is invariably followed

by slight nausea which lasts for some time.

The ether spray has been suggested, but it may cause undue irritation, and give rise to an amount of mucus secretion which would constitute a disagreeable complication.

There are other anæsthetics which might be used, but general anæsthesia should be avoided. The introduction of the tube does not hurt the patient. It is the local irritability which you wish to allay by the use of the local anæsthetics mentioned.

Is it allowable to wash out the stomach in cases of gastric ulcer? There is considerable difference of opinion on this question. Some maintain that, if the patient submits kindly to the operation, and it be done carefully, and if the tube can be introduced without difficulty, and the stomach be washed out gently with warm water properly medicated, the procedure may be admissable. But under other circumstances the treatment is considered of doubtful propriety.

In cases of carcinoma of the stomach, this method may give the patient temporary relief, if there is vomiting and hypersecretion of gastric fluids. But the conditions governing its use in cases of gastric ulcer should be regarded in connection with cancer of the stomach.

The vomiting of phthisis may be due to causes other than those referable to the stomach, but when dependent upon disorder of the stomach itself, marked relief may be afforded the patient, sometimes, by employing this method of treatment.

Caution, however, must be exercised in its application in cases in which the pulmonary disease is very far advanced.

Great care, also, should be exercised in employing this method, if indeed it be resorted to at all, in patients above sixty years of age. If there be evidence of extensive arterial degeneration even at a much younger period in life, it will probably be the safer course not to adopt the method. Certainly you would not resort to it, unless you are well assured that, either naturally or by reason of preparatory treatment, the procedure can be carried in effect with only a very moderate amount of resistance and "gagging" on the part of your patient. The occurrence of central hemorrhage during the operation would be an exceedingly disagreeable complication.

## TRANSLATIONS.

THE USE OF LARD IN PHTHISIS PULMONALIS.—A Russian physician treats phthisis by administering lard boiled in milk. The results are "very encouraging," consisting of "increase in weight, diminution of the cough, loosening of the expectoration and return of appetite." All the observations were made upon patients in the first stages.

A NEW PEPTONE FOR SUBCUTANEOUS USE.—The unsatisfactory nature of the trials hitherto made, with hypodermic injections of medicinal agents diffused through peptones, has prompted Raynaud to seek for a better vehicle in a peptone prepared from the albumen of the blood.

The method of preparation is as follows:

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| Pure blood-albumen, | grm. 5. |
| Pepsine (extractive dialysie), | 0.75 |
| Distilled water, | 75. |
| Pure hydrochloric acid | gtt. xix |

Digest for three days at a steady temperature of plus 46° (Cent.)

At the end of this time the digested liquid is clear, and not affected by ferrocyanide and acetic acid.

Analysis shows the liquid to contain:

| | |
|---|---|
| Insoluble residue remaining on the filter after neutralization, | grm. 0.490 |
| Syntonine, | 0.125 |
| Dry peptone, | 3.940 |
| Salts, separated by dialysation, | 0.96 |

After purification by dialysis, concentration and evaporation by gentle heat upon plates of glass, this peptone presents itself under the form of fine light scales, hygrometric, brilliant, resembling the fine scale pepsins. Dissolved in distilled water and precipitated by alcohol, we obtain a very white powder, indicating a sufficiently great purity. For hypodermic use, it advantageously replaces the fibrin peptones, because we inject into the circulation an albuminoid whose composition most nearly approaches that of the blood itself.—*Bul. Gén. de Thérap.*

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, NOV. 15, 1887.

## EDITORIAL.

### THE RELATIONS OF PRACTICAL PHARMACY TO MEDICINE.

THE encroachments of the pharmacist upon the province which the physician regards as exclusively his own constitute a chronic source of complaint upon the part of the latter. And as with each succeeding year the difficulty becomes more pronounced, the necessity for a remedy becomes more pressing.

On the one hand, the demands upon the physician are increasing. The universality of education renders the public more exacting; and while the schools are lengthening their terms of study and multiplying their requirements, the competition is growing sharper; so that the expense of both time and money to him who expects to hold his own in the struggle for professional existence is vastly increased.

The resort to Europe, for the finishing touches to the medical education, has become so much a matter of course, that the physician who has not spent at least a season in Vienna or Paris is as rare as the Frenchman who has not the ribbon of the Legion of Honor. On the other hand, the sources of professional income are becoming yearly scantier. The specialists have plundered their mother until she stands nearly naked. The gynecologist, laryngologist, rhinologist, ophthalmologist, aurist, neurologist, the expert in diseases of the chest, of the rectum and of the genito-urinary system, bid openly for every patient who can afford to pay large fees. The druggist takes the cases of venereal disease, the dressing of wounds and the treatment of all minor ailments which do not confine the patient to the house. The balance goes mainly to the hospitals and dispensaries. We dread to definitely state just what is left for the family physician, lest somebody will seize upon it as a new specialty, and leave us nothing!

With such sharp competition, it is not to be wondered at that the very large slice cut from our loaf by the pharmacist should excite our ire. The specialist is one of us; but the apothecary is like an assistant, who, growing big, usurps the dignities and embezzles the emoluments of his employer.

But let us look at it from the standpoint of this aspiring caste. They are not professional in their objects or in their impulses. The medical profession, often as individuals fall below it, has still a standard above that of trade. As Da Costa so aptly pointed out in his opening address, we cultivate with ardor the sciences which aim at destroying our professional existence. No physician can seek to retain his own discoveries for his pecuniary benefit, and retain his position among his fellows.

The druggist is simply a merchant with goods to sell. His standard is commercial, not professional. He must be governed by the laws of trade; must buy cheap and sell dear; must advertise his wares; must use the same means as his competitors to attract customers; must cater to their needs, and consult their wishes. Hence, if his neighbor provides soda-water, or postage stamps, segars, and cough drops, or if he dress wounds, treat gonorrhœa, and prescribe across the counter, he must do the same, or go out of business.

Unless the retail druggists as a body decline to prescribe, it is scarcely possible for any of them to do so. And such concerted action as would result in relinquishing a profitable branch of trade

will never be taken. Nor can the medical profession compel it. Some years ago, the Medico-Legal Society of this city undertook to form a league against the encroachments of the druggists, but the scheme failed; principally through the well-meant, but mistaken, zeal of one of the members.

We doubt whether the difficulty could be remedied by legal enactment. So many occasions arise in which hardship would ensue if druggists were not allowed to dispense drugs without a prescription, that the law would fail from its complexity.

The fact then remains that the druggist is our most dangerous competitor. He is under no professional restraint; he has an insight into our methods; hears of the results of our treatment; and thinks that when he can select the best out of twenty physicians' prescriptions, he knows more than nineteen of them.

His good opinion of himself is enhanced by the support he receives from influential quarters. His periodicals are crowded with advertisements from rich and powerful firms who never enter the medical journals. Others advertise in the latter until they can claim the endorsement of the profession for their nostrums, and then transfer their patronage to the journals of the drug trade, or to the general public.

How can the druggist be blamed for having a good opinion of himself, when well-known houses plaster their journals with such matter as the following:

"This firm announces that they will upon application send to any druggist a circular which will instruct him in the art of fitting glasses to ailing eyes, so that he can do so without the interposition of the physician."

Think of it! The cross-roads druggist, who writes to his journal to know what "ad" means in a prescription, is to correct the defects in a piece of the human mechanism so delicate and so complicated that some of the best men in the profession devote their lives to its study, exclusively!

It is curious that the professional opticians do not look upon the fitting of glasses as so simple a matter. We have made inquiries of several, and all declined to have anything to do with it; saying that they preferred to leave the responsibility with the physicians.

We asked a number of practising physicians, but while each acknowledged doing a little gynecology, etc., they refused to meddle with the eye.

But the druggist, knowing little or nothing of the difficulties of the subject, fails to see in such an advertisement the greed which seeks for a few dollars at the expense of doing irreparable injury to some unfortunate's visual organs. The druggist sees only another proof of his own capability.

Is there then, no remedy for this evil? We believe that there is; that a method can be put in operation which will restore our lost ground, and put the profession on a firmer footing than ever before.

This method is to go back a few steps, and reunite the profession to the business. When the young physician receives his diploma, instead of sitting down in his office, or studying methods of so advertising himself as to keep within the letter of the law, although breaking it in spirit, let him set up a pharmacy.

The advantages are as follows: The experience he will gain, in handling drugs, is of the greatest value. He will profit by this through his whole future career.

The experience he will obtain as a physician, from one year in a drug store, will be more than he would receive from five years of practice.

He will have the advantage of studying the methods and witnessing the results of the practice of other physicians; a privilege more valuable to him than it now is to the druggist. He will build up in one year a larger practice than by five years of ordinary work.

The druggist will then be confronted by a competitor better equipped than himself. He will be forced out of business, or into regular medicine. Or else, *he* will clamor for laws restraining each party to its proper sphere.

That this is a natural and effectual remedy is shown by the remarkable success which have been obtained by the Provident Dispensaries of London; which, although discountenanced by the profession, have succeeded in winning its approbation; because they were in accord with the actual needs of both profession and people. W. F. W.

## ABRUS PRECATORIUS.

DR. Sidney Martin, in a communication to the recent Congress on the proteids of the seeds of Abrus Precatorius (Jequirity), reaffirms his former statement that the active principles in the seeds consisted of an albumose and a globulin. The results of his investigation may be summarized as follows:

1. *Abrus-albumose* is much less active than the abrus-globulin. In the eye it does not always produce conjunctivitis; subcutaneously, it does not always produce death.

2. *Abrus-globulin* is very toxic. Instilled into the eye it produces "abrus-ophthalmia," which in most cases ends in recovery, though in some cases the animal (rabbit) dies in a few days (a fact previously noted by Klein.)*

If abrus-globulin be placed in a solid form under the eye-lid, it produces intense conjunctivitis with local ecchymoses.

Hypodermically, it always kills the animal even when given in small doses; and its toxicity is proportioned to the dose. It produces great local congestion or œdema, with, in the majority of cases, ecchymoses, sometimes punctiform, sometimes diffuse. The post-mortem signs agree with those described by Warder and Waddell.

The activity of abrus-globulin is at once and permanently destroyed by heating its solution in saline up to 75° (C.). The heating was performed gradually; the test tube containing the solution of globulin being placed in a flask of cold water, which was beaked; directly the temperature rose to 75° (C.), or any other temperature that was desired, the test tube was removed and rapidly cooled under the tap. Heating in the manner described up to 70° (C.) did not destroy the activity of the globulin; nor was this affected by any lower temperature. In ten per cent. sodium chloride solution, its globulin coagulated between 66° and 73° (C.).† He found that the toxicity of the globulin is destroyed at this temperature, and was led to point out that the activity of the poison seemed to be intimately connected with the uncoagulated condition of the proteid. Full details of the experiments, with further remarks on the albumose, and the action of these proteids on protoplasm will be shortly published by Dr. Norris Wolfenden and the author of this paper. F. W.

"A STRANGE HOMICIDE CASE" was the title of a paper read before the Medical Jurisprudence Society of Philadelphia, by Dr. John T. Eskridge, of Colorado Springs, which led to the usual discussion as to medical and moral or legal responsibility.

* Micro-Organisms and Diseases, 1884.

† Proc. Royal Society, Vol. 42, p. 333.

## NOTES FROM SPECIAL CORRESPONDENTS.

### BERLIN.

EXTIRPATION OF THE UTERUS FOR CANCER—CÆSARIAN SECTION—ASSOCIATION OF GERMAN NATURALISTS AND PHYSICIANS—THE DEPENDENCE OF SUMMER DIARRHŒA UPON ELEVATED TEMPERATURE AND BAD HYGIENE—THE CLIMATE OF AFRICA.

GERMAN gynecologists have been of late very busy with the statistics of the operation for the complete removal of the uterus for carcinoma. Material is now on hand to determine if the operation be a justifiable one. The testimony is to the effect that it is; and many consider it superior to any other treatment of the cancerous uterus. Up to the close of the year 1886, 811 cases have been collected, with 47 deaths, or 15.1 per cent. With increased experience the mortality is gradually decreasing, and we may expect it to continue to do so. As to immediate mortality, the operation shows better results now than the removal of the breast for cancer. The patients are usually prepared for the operation with an antiseptic vaginal injection. One stroke of the knife frequently suffices to open the pouch of Douglas, and display to view the posterior fornix, after which the cutting is done cautiously, paring with the finger nail. Warm water is kept running over the surface and no sponges are used. The peritoneum is opened at one side and one finger is passed in, which frees the broad ligament from the uterus. The ligament is then in like manner freed on the other side, up to which time the hemorrhage is very inconsiderable. The bladder is then freed, which is done with the forceps and the knife. The cut borders of the vagina are then united to the peritoneum just as was done the other side. It seems to be of little import whether the uterus is removed through an incision made posterior to the neck or at the side or front of it. Some turn the uterus over; others draw it down and remove it. Some leave the opening in the floor of the pelvis; others close it. It may be drained either with iodoform-gauze or a tube. If easily done, the tubes are also removed. It is not the custom here in Germany, as in France and England, to use the clamping forceps to restrain the hemorrhage from the ligamenta lata. The prognosis in the total extirpation of the uterus is quite as good as in the supra-vaginal operation, and is rapidly supplanting it.

Those attending laparotomies in the clinics of Olshausen and Martin are required not to come in contact with any infectious material the day before the operation; to wear clean linen and clothing which has not been in the reach of infection; to take a full bath immediately before coming to the operation; to remove the coat, vest, collar, neck-tie and suspenders before entering the room; not to touch any of the instruments or materials used in the operation. The operator and his assistants wear a suit of muslin, and are thoroughly non-septic.

Saenger's method of performing Cæsarean section is rapidly gaining confidence among the Germans; Credé, Leopold and Gusserow have all done the operation and recommend it very highly. Leopold recommends complete closure of the abdominal cavity with the continued suture after the protrusion of the uterus. The hemorrhage after the uterine incision he controls by means of a rubber band or manual compression. He is careful to free the uterine cavity from decidua and sees that the uterine sutures are very exact in their coaptation. The uterus is opened with an incision beginning near the fundus and extending down to the place where the peritoneum is movable and sits loosely on the inferior uterine segment. The cavity is strewn with iodoform and the incision closed with eight silver sutures, which close the muscle without the decidua; about sixteen silk sutures are then applied, which penetrate the peritoneum only.

The operation is most successful in Germany; the first 50 cases after Saenger resulted in 36 recoveries or 72 per cent. After Porro, 29 died, or 58 per cent. After Saenger, 14 died, or 28 per cent. This shows a difference of 30 per cent. in favor of Saenger.

The Sixtieth Session of The Association of German Naturalists and Phy-

sicians was held at Wiesbaden. This association is one of the most important of its kind in Germany and draws from all parts where the German tongue is spoken. Its membership numbers way up in the thousands. The city did its utmost to make the meeting a pleasant one. A large reception platform was erected at the depot; and the principal street, Wilhelm Strasse, which leads from the depot to the Kursaal, was highly decorated with flags and evergreens. The session was opened at 9.30 A.M., September 19th, by Prof. Dr. Fresenius, of Wiesbaden. The president in his opening speech said that this was the third time he had the honor to preside over this assembly, and it was the third time the association had the pleasure of meeting in this city. Contrary to human experience the association is becoming every year more vigorous instead of growing gradually weaker as the three score years were attained. The growth of the association during the last two decades was due in a large part to the union of the Fatherland and the increase of freedom, for which we have largely to thank our worthy emperor, whose interest in the advancement of science is so well known. Three cheers were then proposed for the emperor, which were given with a will and a telegram was sent to him. Dr. von Ibell welcomed the guests as mayor of Wiesbaden, and dwelt on the great good done the city by hygiene.

The scientific papers were then begun, the first being by the renowned chemist, Professor Wislicenus, of Leipsic, and was "Concerning the Development of the Teaching of the Isometric Chemical Connections."

Prof. Preyer, of Jena, read on the subject, "Science and Schools." He discussed the question of over pressure in the schools and was in favor of the development of the body as well as of the brain. He dwelt at length on the subject of short-sightedness among the scholars, which is nowhere so prevalent as here in Germany, and which is year after year becoming more prevalent, and which, in fact, can be noticed to become more and more aggravated as the classes are more advanced. The health of the children also suffers in other respects at school. He thought the short-sightedness was present in such great amounts on account of the poor light in the school-rooms, the faulty position of the scholars while at study and the unreasonably long duration of the hours of instruction, by which the brain is overstrained; and additional trouble is caused by the badly constructed school-benches and desks and the holding and carrying of heavy books and other materials. The classics, he thought, occupied too much time in the schools. They were studied by children of too tender years, and studied too much and too long. It were better were the modern languages, modern history, and the sciences studied even to the exclusion of the dead languages. The paper was received with great manifestations of pleasure.

Dr. Schwartz, of Cologne, read a paper on "Hygienic Problems which present themselves to the Physician who treats Diseases which spread in Epidemics." The author cited the readiness with which the plague among animals was controlled by the authorities by prompt efforts to prevent its spread, and said that efforts in this direction with regard to infectious diseases among men are not nearly so prompt or efficacious, and left much to be desired. Many of the rules which are made for the prevention of the spread of disease among men conflict more or less with private interests and are thus rendered to this extent ineffective. The public good is too often laid aside for private interests. It is very necessary that early and exact knowledge of a beginning epidemic be had.

Dr. Meinert, of Dresden, read on the influence of the temperature of the atmosphere on the mortality from diarrhœas of nursing children. This gentleman spoke of the insufficient ventilation and too great warmth of the houses during the summer months. It is worthy of observation that the death-rate in the several stories of the house is different. In the rooms of the cellar, which are generally cool, the death-rate from diarrhœal diseases reaches only 4 per cent. It is highest, however, on the ground floor, where it reaches 12.75 per cent. This is supposed to be occasioned by the fact that this floor

is exposed both to the direct rays of the sun and to the reflected heat from the ground. In the first, second and third stories the mortality is considerably lessened. Houses which cool off slowly, as brick and stone ones, and the houses of bakers in which the bake-oven is built, thus keeping up the heat, have more children suffering from these diseases than others. In the working classes, the mortality among children from this class of diseases reaches 31 per cent.; in the middle classes, 28 per cent. and in the higher clases a lower proportion. The better classes, by opening their windows, and clothing their children in a sensible manner avoid this high mortality. It is interesting to notice that in the South of Europe, for instance in Italy, where the houses are built with the idea of being as cool and well ventilated as possible, the death rate from these diseases is not so high as in Germany, where this ventilation is not thought necessary.

Dr. Ludwig Wolf, of Berlin, read on "The Coast and Inland Climate of Africa." On the coast the rainy and dry periods exist, but in the interior there is no such sharp division. The temperature change in the interior is very great. In central Africa malaria is the only disease which causes much trouble. Other diseases are present, but not so much so as in Europe. He would not recommend emigration in large numbers to that part, as equatorial Africa is not well suited for Europeans. E. S. McKee.

## RICHMOND.

VIRGINIA STATE MEDICAL SOCIETY—DISCUSSION ON ANÆSTHETICS—DR. HAMMOND ON COCAINE—SOCIAL FEATURES OF THE MEETING.

THE annual meeting of the Medical Society of Virginia brought together over two hundred physicians from different parts of the State during the present week. The Society was presided over with dignity by Dr. Bedford Brown, of Alexandria, an urbane, courteous gentleman of the old school, whose learning is equal to his popularity. The President for the ensuing year is Dr. Benjamin Blackford, of Lynchburg, a solid-looking man of business methods, under whose administration the Society will doubtless prosper even more than hitherto. The healthy condition of the organization is shown by the fact that nearly seventy-five new members were elected during the meeting, bringing the total membership up to nearly seven hundred. This, I am informed, comprises nearly one-half of the regular practitioners of this State—a larger proportion than probably any other State Society can show.

The scientific proceedings were of a high order of excellence. The discussion on anæsthetics on the first day of meeting brought out the best talk on the subject that it has ever been my good fortune to listen to. The subject was introduced by Dr. Hunter McGuire, who may be looked upon as easily the first surgeon in the South. Dr. McGuire confined his consideration to chloroform and ether. The following are the more important points of Dr. McGuire's remarks:

"In the rapid progress of science, it is possible that some other anæsthetic, safer and superior to either chloroform or ether, will be discovered, and the discussion of the relative value of these agents become unnecessary; but many years of very patient observation will be needed to settle the fact that some new agent is safer and better. When the experience of the civilized world is collected and analyzed, it will be found that in certain cases ether should be given, and in certain other cases chloroform employed, and that every good surgeon will be expected to exercise discrimination in the selection of his anæsthetic. For myself, I am wedded to neither of these agents. In general terms, in very feeble American people, or those suffering from the prostration of shock, or loss of blood, I prefer ether; in either the very young or the old, or in cases where cardiac, renal, or pulmonary disease is suspected, as a rule, I think chloroform is safer.

That both agents sometimes kill the patient, the most bigoted and partisan advocate of either ether or chloroform must admit. But which of the anæsthetics is the more dangerous and apt to kill is the paramount but undetermined question. Safety of the patient is the important point, before which all else

should give way; compared with that, convenience, comfort, time, money, and everything else are as nothing. The tracings of the sphygmograph show invariably during the inhalation of chloroform marked depression of the heart and circulation. In anæsthesia from ether this is only occasionally seen, and then it is not so marked. The sphygmograph shows that depression of the vasomotor functions, and cardiac paralysis are more likely to occur from chloroform than from ether; that the former is a much more powerful and dangerous agent; but clinical experience shows that when the vapor of chloroform is withdrawn, and consciousness returns, the patient is free from all danger from the anæsthetic. In ether, several minutes after the vapor is taken away, and after all danger from the anæsthetic is supposed to have passed, when all ether vapor, we would think, had escaped from the lungs, dangerous symptoms suddenly present themselves, from which the patient is with difficulty rescued, or even death itself may take place. Or again, hours, or even days, after ether has been given, acute nephritis or pneumonia occurs, directly traceable to the ether, threatening the life or causing the death of the patient. We may say, then, that chloroform is the more powerful and immediately dangerous anæsthetic; that when it kills it does so suddenly by shock; but that when the vapor is withdrawn, and consciousness begins to come back, the danger is absolutely over. Ether may kill, as chloroform does, just as suddenly during the operation, but it is much less likely so to do. The danger from this anæsthetic is, however, not over when the vapor is removed. Alarming symptoms or death may occur, by cardiac paralysis, a few minutes after, or by acute nephritis or pneumonia hours or days after the administration. I think, with regard to the selection of an anæsthetic, this much is established; that in acute or chronic diseases of the kidneys or lungs ether is more dangerous than chloroform.

Both ether and chloroform, especially the latter, may kill where too concentrated a vapor is used; both may kill during the period of muscular excitement, or by paralysis of the respiratory nervous centre.

To give chloroform requires skill, and the ability, not always possessed by an assistant, of attending strictly to his own business. A man accustomed to give ether is not always a safe administrator of chloroform. In giving chloroform it is better to begin with a small quantity, and allow with the vapor plenty of fresh air, and gradually accustom the patient to its use. Never surprise or alarm him with vapor too concentrated or abundant. Never give chloroform in a hurry. The use of ether does not demand so much care, although, if what I have stated with regard to its dangers is correct, a certain amount of skill and caution should be observed.

The plan of giving alcohol as a heart stimulant just before administering chloroform is, in my opinion, liable to serious objection, and for many years I have abandoned its use in this way. In the first place, it is difficult to know in all cases what a stimulant dose of whiskey is; so much depends upon the habits and temperament of the patient, or the depression which disease, injury or mental apprehension has produced. A stimulant dose of whiskey in one man may be a sedative dose in another, and in all cases the secondary sedative effect of the alcohol may come on, especially if the anæsthesia is kept up for some length of time, and add to rather than diminish the depression. I am satisfied that alcohol increases the duration and violence of the stage of excitement, and makes nausea and vomiting more likely to occur during the operation, and especially after it is completed. We all agree that men accustomed to the free use of liquor are bad subjects for anæsthetics, and my observation leads me to think that a dose of whiskey before giving chloroform averts no danger, but rather adds to this, as well as to the general discomfort of the patient, There is one hazard from chloroform which, although we are frequently taught, we are apt to forget, that is operating during partial anæsthesia. Many of the deaths from chloroform have happened in this way. A tooth is to be drawn, a pile tied, a

felon opened, or some operation performed which is the work of a few seconds, and the inclination is to operate before the anæsthesia is complete. It is extremely hazardous to do this.

Ether is safer when the operation is to be performed with partial anæsthesia. In all operations about the face or throat, where blood or other fluids may escape into the wind-pipe, ether is the more dangerous, and chloroform the safer agent to use.

In the beginning of this paper, I said that I thought chloroform the safer agent in cardiac affections. I wish to except from this class a nervously weak heart. In organic valvular disease of the heart, with the usual compensative muscular hypertrophy, I have given chloroform hundreds of times, and never had cause for alarm. On the contrary, the heart's action became usually more quiet and regular, and chloroform is safer here than ether. But in a heart weak from fatty degeneration, or from loss of blood, or great anæmia from other causes, any anæsthetic is hazardous, but chloroform is more dangerous than ether.

Of all the elements of danger from chloroform, fear on the part of the patient is the greatest. If the patient is, so to speak, in mortal terror of the anæsthetic, the heart is nervously weak, and the hazard to life is especially great; all things being equal, ether then is the safer agent to use. To the dread of the operation the patient may have added the hazard of the anæsthetic, and the emotional condition be one of absolute terror. Fatal cases under such circumstances are not uncommon; a few words of encouragement from the administrator, or a calm, confident manner on his part may allay the anxiety; but if it does not, and the great alarm continues, it will be safer to give hypodermically one-quarter grain of morphine and one-hundredth of a grain of atropine and wait fifteen or twenty minutes for the physiological effects of these drugs, before giving the anæsthetic. Emotional excitement greatly increases the chances of paralysis of the nerve centres which preside over the circulation. Morphine obtunds the sensibility of the nervous system, and at the same time is a cardiac stimulant. Atropine is probably still more powerful in this direction, and the employment of these drugs, under such circumstances, will lessen or completely remove the danger. I think both reason and clinical experience have confirmed this fact.

Children take chloroform well and safely. The principal reason for its safety in children is that they are ignorant of its danger, and are not afraid of being killed by it. It is a significant fact, too, that Nusbaum has seen in military life 40,000 administrations of chloroform without an accident, and that in the Confederate army corps, to which I was attached as Medical Director, chloroform was given 28,000 times without a death ascribed to its use.

Can these facts be explained by the age, sex, health, etc., of the soldiers? I think not, because men of the same age and health sometimes die in the hands of civil surgeons in chloroform anæthesia. In military life, I know, not simply from theory, but from actual observation, that the pain of a gun-shot wound and the danger from it to life, or loss of limb, makes the soldier dread the hazard of chloroform very little, if at all. It is a significant fact, too, in this connection, that chloroform has been given to hundreds of thousands of women in child-birth, and, when the agent was in the hands of competent men, but one fatal case had occurred, and in this solitary instance it was by no means certain that death was due to the anæsthetic. Even when surgical operations have been required and performed in obstetrical cases no deaths have occurred from its employment. Indeed, so far as we can see from the experience of thousands of cases, chloroform is absolutely safe in parturient women—even less dangerous than a dose of ergot, or oil, or opium. How can we explain this great and entire exemption from danger when using chloroform in obstetrical cases? We cannot account for it by the sex of the patient or the small quantity given at a time, for in other conditions death sometimes results from small doses. Her age has nothing to do with it. She is, likely, stronger and more healthy during the child-bearing period of life than in youth or old age. Nor does this same

condition of age or strength or health avert the danger from chloroform in other cases not obstetrical. The recumbent position surely does not explain it, for while this position in anæsthesia, from both chloroform and ether, should, when possible, always be observed, many deaths from chloroform and ether have happened to patients in the recumbent posture. Have the pains of labor anything to do with this exemption? I believe not, for we have pain from the surgeon's knife, and from the disease or injury for which the operation is performed. The pains of labor, too, often stop for several hours. I think we can only explain this absence of danger from chloroform in obstetrics by the absence on the part of the patient of any dread of the chloroform; as a rule, so far from any fear of it, she begs piteously for it, and her condition renders her absolutely free from that emotional state which depresses the heart and circulation."

Among the other papers of more than ordinary interest were one by Dr. W. A. Hammond, of New York, on Coca and Cocaine, and one on Battey's Operation, by Dr. Battey, who is an Honorary Fellow of the Society.

Dr. Hammond related his personal experience and observation with cocaine, and stated with great positiveness his opinion that no such condition as the "cocaine habit" can exist. Patients accustomed to the continuous use of large doses, could give it up without suffering should they desire to do so. This proposition met with marked dissent.

Dr. Milton Josiah Roberts, of New York, gave an interesting demonstration of his electro-osteotome.

The social arrangements were beyond criticism. On the first night the Faculty of the Medical College of Virginia gave the Fellows and invited guests a theatre party, followed by a reception and collation. On Thursday evening, Drs. McGuire and Joseph A. White gave elaborate receptions, at which the most appetizing viands and inspiriting beverages were offered with lavish hands,—and accepted by appreciative palates. After adjourment, Dr. Chas. M. Shields gave an elegant reception as a prelude to the concluding banquet tendered by the profession of Richmond to the Society. At this banquet Governor Fitzhugh Lee was present as a guest and made one of his characteristic speeches in response to the toast "The State of Virginia." G. H. R.

Richmond, Va.

## NEW YORK.

INCRUSTATION OF TUBE IN INTUBATION; INSANE ASYLUM MANAGEMENT; SOCIETY NOTES.

AT the meeting of the Pathological Society, October 26, the committee on microscopy reported on an incrustation of a tube used in intubation of the larynx in a case of diphtheritic croup. They found the incrustation to be composed of carbonate of lime. It was limited almost entirely to the head of the tube. Beneath, the surface of the tube was to a considerable extent roughened. Dr. Freeborn, who made the report, was disposed to think that the bichloride of mercury, used in the treatment of the case, had formed an amalgam with the gold plating, and on the rough surface thus exposed the carbonate of lime had been deposited.

Dr. Northrup said this constituted a new point in the history of intubation. He had had one case in which the head of the tube became slightly roughened, and while the patient recovered, she was a long time in regaining her voice. This may have been due to the roughened surface remaining so long in contact with the soft parts.

This fall and last summer the daily press has been agitating the abuses connected with our asylums for the insane. Doubtless, as a result of such agitation, a number of inmates have been set at liberty sooner than might otherwise have been the case. Sensationalism usually accompanies to some extent the reformatory efforts of the public press. This is the view of the profession regarding the course of *The World*, in having one of its reporters pretend insanity, and thus get committed to the Asylum for Women on Blackwell's Island. But truth often has a greater moral effect when presented in a sensational way.

If commitment to an asylum were not looked upon as implying imprisonment for life; if it were generally be-

lieved that the patients were released as soon as there was fair evidence of cure, as in the case of typhoid fever, pneumonia and other diseases, for which the poor are admitted to hospitals; it is not likely that any criticism would have been made of those who examined and committed Nellie Bly to the asylum. The fact that she pretended insanity would have been sufficient reason for keeping her for a time under observation. But there is a popular impression that once declared insane, always insane; and once placed in an asylum, always to remain in an asylum. Physicians know that apparent sanity among these inmates is often only temporary, and that relapses may occur in cases of recent cure when returned to their former surroundings. Notwithstanding these facts, the present state of public sentiment is such that it would probably be better to run some risks of discharging patients before thoroughly cured, than to detain one sane person who should be at liberty. Moreover, it begets a suspicion that those in charge, who make lack of sufficient funds an excuse for want of proper appointments and care of the inmates, are misusing the money appropriated. Why, they ask, do the authorities retain also the sane when there is want of sufficient means to provide properly for the insane? Is it not because they are allowed so much a head per diem, and of this meager allowance they take a part for themselves? The more inmates, therefore, the greater the boodle!

The *World's* reporter found that it was easy to get into the asylum, but difficult to get out; that there were a number of sane people detained among the insane; that the treatment was such as to drive the nervous and weak in body permanently insane; that the rooms were cold; that the bed-covers were insufficient; that the bathing facilities were inadequate; that the nurses abused the inmates; that the food was insufficient and of poor quality; and that the doctors gave too little attention to the patients.

The outcome is, that the grand jury has made an investigation, and the people are requested to open their pocketbooks. "They found that the food supplied to the patients, although sufficient in quantity, was not good enough in quality." What could this mean? That the meat was putrefied? That the potatoes were rotten? That the flour was infected with worms? That the fruit had undergone decay? If so, then where is our Board of Health? After the Italian fruit dealers, who, here and there, have partly decayed apples on their stands? Food may be poorly cooked and badly served, but want of savor due to this cause would hardly be attributed to bad quality, and if it were, it might be readily corrected. The grand jury recommended that the law be so changed that the supervision of the insane be placed in the hands of a different commission from that which has charge of the criminals.

Dr. Joseph D. Bryant, of the Board of Health, read a paper at the Academy of Medicine, November 3d, on "How Can the Medical Profession Aid the Board of Health?" He recommended that a conference committee be appointed from among the profession to co-operate with the Board of Health.

On motion of Dr. Elliott, the President was authorized to appoint a committee of five, including the president.

At the meeting of the Medical Society of the County of New York, October 24, Dr. Laurence Johnson was re-elected president; Dr. Carpenter, secretary; Dr. A. S. Hunter received the office of treasurer, filled for eight years by Dr. O. B. Douglas.

A vote of thanks was extended Dr. Douglas for his services. It appeared from the report of the Comitia Minora that the society actually made money by publishing a directory of its membership and of the profession in the city; the income from advertisements over all expenses was nearly one hundred dollars. R. C. S.

November 4.

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THE QUARTERLY REVIEW OF NARCOTIC INEBRIETY is the name of a new periodical to be devoted to the consideration of the opium, the chloral, and the allied habits. I. A. Loveland, M. D., will be the editor, and the office of the journal will be at Gilsum, N. H. The first number is to be issued January 1, 1888.

## REVIEWS AND BOOK NOTICES.

A Reference Hand-Book of the Medical Sciences. Edited by Albert H. Buck, M. D., New York City. Volume V. Wm. Wood & Co., 1887.

The present volume of Buck's Handbook presents to the readers a series of monographs extending alphabetically from Miliaria to Pott's Disease. The principal articles are freely illustrated, especially the sections on anatomical and botanical subjects We cannot add anything to the terms of commendation in which we have previously spoken of this splendid work, which needs to be seen and examined in order to be appreciated.

Diseases of the Female Mammary Glands, by Th. Billroth, M. D., of Vienna, and New Growths of the Uterus, by A. Gusserow, M. D., of Berlin. Illustrated. These two works constitute Vol. IX of the "Cyclopædia of Obstetrics and Gynæcology," (12 vols.; price, $16.50) issued monthly during 1887. New York: William Wood & Company.

Like the preceding issues of this series, the present volume, which contains two treatises, one by Billroth, the other by Gusserow, edited and translated respectively by Drs. Egbert H. Grandin and Edmund C. Wendt, is well printed and contains numerous illustrations. The twelve volumes of this publication will form a complete library of the present state of development of midwifery and diseases of women. The remarkable vitality shown in the growth of these departments of medical science, make it imperative upon physicians to have good works of reference, and we consider the present series of standard treatises upon subjects connected with gynæcology and obstetrics as specially suited to the wants of the general practitioner.

Elements of Botany. Including Organography, Vegetable Histology, Vegetable Physiology and Vegetable Taxonomy, and a Glossary of Botanical Terms, illustrated by nearly five hundred Engravings from Drawings by the author. By Edson S. Bastin, A. M., F. R. M. S., Professor of Botany, Materia Medica and Microscopy in the Chicago College of Pharmacy. Cloth, octavo, 300 pages, price, $2.50. Chicago: G. P. Engelhard & Company, 1887.

In order to become a botanist it is necessary to botanize and study flowers rather than to study books. The natural method of approaching a subject is to go from step to step, from the known to the unknown. This is the plan pursued by Prof. Bastin in this elementary treatise. Practical botany is taught by a series of graded exercises in analysis of familiar plants, and field botany is encouraged in every way. The great defects of ordinary treatises in botany is that they require the aid of a teacher, and the special attraction of this work is, that to the intelligent student it is sufficient to give a good introduction to botanical science. It is freely illustrated from original drawings, and is well printed.

A Compend of the Practice of Medicine. By Dan'l E. Hughes, M.D. Physicians Edition, thoroughly Revised and Enlarged; based on the Third Revision of the Quiz Compend Edition, and including a very complete section on Skin Diseases. Philadelphia: P. Blakiston, Son & Co., 1887.

This gilt-edged edition for physicians is as ornamental as it is useful. The former arrangement, in two volumes, which is now in its third edition, is the basis of this revision, which is enlarged and has a section on skin diseases added. Those who wish a convenient hand-book of Practice for reference, we think will find in the one before us, a superior book of this kind.

The American Journal of the Medical Sciences, with the beginning of the new year, will be published monthly instead of quarterly as heretofore. This is a step required by the spirit of the times, when the evidences of medical progress appear so rapidly that the older methods of publication are superseded, just as the locomotive and steamboat have taken the place of the stage-coach and canal-boat. We herald this change as an indication of renewed vitality in the oldest and best of our American reviews.

## LETTERS TO THE EDITORS.

*It is the earnest desire of the Editors to increase the usefulness of this Journal, and to render it a practical helper to its readers. One method of accomplishing this end is to open a column devoted to letters to the Editors. Short, concise papers upon medical subjects, records of cases worth being reported, and queries on any medical subject are requested.*

### ON THE ETIOLOGY OF ELEPHANTIASIS ARABUM.

Editors MEDICAL TIMES:

*Sirs:*—The enclosed article on elephantiasis Arabum, just received from Dr. Mapother, consulting surgeon to St Vincent's Hospital, Dublin, is of so much importance as casting more light on the etiology of this familiar, but little understood disease, that I deem its reproduction in the columns of the TIMES, together with a few remarks on the disease, desirable. The author, in an accompanying communication from Vienna, Austria, calls attention to the fact that he had had the pleasure of a long conversation with Prof. Kaposi, and that this noted dermatologist had thoroughly agreed with him as to the value of the case cited as bearing upon the cause of the disease.

So far as I am acquainted with the literature on the subject, very few such cases have been recorded, which adds to the interest in this particular one. It is a well-known fact that muscular action assists in the upward flow of blood and lymph from the lower extremities; any conditions of climate, occupation or position that prevents active exertion is favorable to congestion and lymphatic stasis.

The development of elephantiasis Arabum in tropical climates is largely due to the enervating influence of such climates which leads to an avoidance of muscular exercise on the part of the inhabitants, and can almost be said to be endemic in tropical and even in semi-tropical climates, while it is very little known in the temperate zone.

I cannot agree with Dr. Mapother when he says that "racial and climatic influences are not potent factors in the production of disease." Any one residing in a tropical climate will be subject to the disease, especially if of a lymphatic temperament. The climate does not act directly, however, but indirectly by inducing sedentary habits. The pathological study of the conditions found in this disease seem to point to its lymphatic origin. The lymphatic glands first become swollen and a general lymphatic stasis results, after which hypertrophy of the connective tissue follows. Quite a number of theories have been advanced regarding the primary cause of the lymphangitis, some laying it to emboli of micro-organisms which block up the lymph channels. That this may be so in some instances is highly probable. Considerable has been written lately regarding the connection of the filaria sanguinis hominis in causing the disease, several cases having been reported where these organisms have been demonstrated in the lymph varices of persons suffering with elephantiasis Arabum. Still the question is pertinent as to whether the filaria be not co-incident rather than an etiological factor in producing the disease. The finding of an organism in a diseased tissue must never be taken as proof of its etiological character. It is possible that the disease may be brought about by different causes, and I do not see why the presence of the filaria sanguinis hominis can not produce elephantiasis Arabum located as it is, when it infects man, in the circulatory system, and, acting as it must, as a greater or less irritant to the economy at large, but that these organisms are always the etiological factors in producing the disease is open to doubt. The fact that the disease is known in countries where filaria are unknown is proof to the contrary.

To my mind any agent that tends to produce lymphatic stasis may also cause elephantiasis, provided such a diathesis exists in the individual. The case in hand seems to point that way. Dr. Mapother, in speaking of the etiology of the disease, says:

"A study of the conditions which lead to the disease in tropical countries seems to me to prove it due to blockage of those subcutaneous lymphatics which are mainly active while muscles

are keeping up the erect posture, and that racial and climatic influences are not potent. Coast fishermen and laborers standing barefooted in water or mud are usual victims. Their posture, liability to skin inflammation from changes of temperature, and checked secretions, and spanæmic state from lowly nitrogenised food and malaria afford all the conditions favorable to lymph production, stasis, and blockage. Elephantiasis is more frequent in Ireland than in England, and with us factors like those just named exist. The evidence seems complete that this hypertrophy of every tissue arises from over-supply of lymph, over-produced or stayed in its flow. Pathological changes in some other lymph-abounding parts are somewhat analogous—for example, recurrent tonsillitis leaving much enlargement and macroglossia. Phlegmasia dolens again presents some likeness, differing however in its acuteness, non-recurrency, and the entire resorption of the effused lymph."

Prof. Kaposi, regarding the obscurity of some cases, says: "Nevertheless it is, as previously remarked, difficult in many cases to make out the cause of elephantiasis of the extremities, especially for the Orient and in the tropics,[1] or also for the sporadic occurance, of cases of elephantiasis genitatium with us (Austria). There must certainly be a racial or individual predisposition or through climatic conditions a way to explain our ignorance. The case of elephantiasis telangeiectasis of Heker and Czerny was considerably developed in three generations of the same family. Yet this was not, as before said, a common form of elephantiasis Arabum." The same climatic conditions acting on a family in which a predisposition existed would be very apt to reproduce the disease through several generations. These features do not form any exception to the rule, but on the other hand strengthen the hypothesis that the disease is of lymphatic origin, and that any cause which tends to produce lymphatic stasis may develop the disease. Dr. Mapother's case of elephantiasis Arabum induced by posture, as below quoted, also seems to indicate the correctness of this view. Dr. Mapother's case is as follows:

"A lady, now aged 80, has had, owing to rheumatic gout, her hips and knees so stiffened, in the flexed position, that for the last seven years she has permanently kept the sitting posture. Lying on the back on a bed or on the side in a hammock became unendurable from the tenderness of the vertebral spines and shoulder prominences. The legs, being thus constantly dependent, gradually developed every condition of elephantiasis. The left now measures 20½ inches, the right 17, just above the ankle fissure, which is the fittest standard point for measurement. They both show the raspberry surface of the enlarged papillæ, the soddened cuticle, especially between the toes, while in some spots a likeness to the epidermis in ichthoysis appears. A few ulcers keep open, and from them there frequently is lymphorrhœa, and occasionally a discharge of blackish matter. She is quite unable to lift either limb, owing to its weight and the weakness of degenerated muscle. About thrice yearly, but without regular periodicity, shivering, extensive redness over the legs, and hard tender streaks along the lymph vessels towards the saphenous opening have occurred, but there never has been any affection of the lymph glands. It may be noted that blockage of these paths in the ham and in the groin should respectively lead to swelling on the outer and the inner sides of the leg; but this limitation has never been observed even temporarily in the course of the disease. She has always lived with good hygienic surroundings."

As factors in the production of the above case, I would rank: 1st. Posture—the lymph had to rise vertically, and the entirely inactive muscles did not compress the vessels which contained it. It therefore exuded, and organized, hypertrophying every tissue. It is in like places, far removed from the central circulatory forces, dependent and without active muscles, that we meet with other examples of elephantiasis—in the scrotum, prepuce, labiæ, pendulous breasts, and earlobes. In these places the recurrent inflammations are not usually observed. 2d. Hyperfibrinosis

[1] Hautkrankheiten, page 651.

in so rheumatic-gouty a person, would give material for the increase of all the tissues, the connective above all, whilst the lessening of red globules would slow their waste. Of parts whose increase may be readily judged, there are examples in which the femoral artery became enlarged thricefold, and in which the popliteal nerve was six times its usual size, the trophic fibres being presumably those most added to. Further, elephantiasis scroti must be looked on as the most astounding of all hypertrophies, for in some instances that part has come to overweigh the rest of the body.

If posture has, as contended, much to do with the production of elephantiasis, elevation, friction upwards, and compression with elastic bandages, should be hopeful measures during the stage of inflammatory œdema.

Since the above was written, Mr. Hutchinson's last fasciculus has been published. That profound pathologist states: "As favoring the production of elephantoid conditions, it is almost essential that the part affected should be pendulous, or, as in the case of the lower extremity, at a hydrostatic disadvantage in reference to its circulation."

The fact that elephantiasis is generally bilateral, is another point in favor of the opinion that the disease is due to lympathic stasis, where the position of the part affected is, as Dr. Hutchinson puts it, at a "hydrastatic disadvantage as regards its circulation."

The fiuids drawn from a part affected with elephantiasis Arabum are very rich in white blood corpuscles. These invade the interstitial connective tissue, and give rise to hyperthropy of the part. The disease seldom presents as an acute inflammation, but rather as a subacute or chronic condition. The development of new connective tissue being more or less constant, the wandering leucocytes or plasma cells become changed into fixed connective tissue cells, as in the normal development of connective tissue. The state of congestion caused over-nutrition of the part, hyperplastic connective tissue naturally results. Treatment should consist in improving the circulation. The patient should take as much exercise as possible. The ligation of the femoral artery has been suggested, but is denounced by the best authorities. The application of an ordinary cloth bandage, which is afterwards wet, or the constant use of elastic bandages, is, perhaps, the best practice. Compression of the femoral artery has also been suggested. Massage and methodical application of unguentum cinereum or ung. juniperi, with diligent use of hot fomentations, together with a horizontal position, will markedly improve the condition of the patient. All these lines of treatment are based on the supposition that the disease is the result of lympathic stasis.

W. X. SUDDUTH.
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## MISCELLANY.

### IS INSANITY ON THE INCREASE?

The Legislature of the State of Pennsylvania two years ago, becoming alarmed at the apparently great increase in the number of the insane brought to their attention by the demands for increased accommodations at the various State institutions for the insane, appointed a committee of investigation. Application was made to the Committee on Lunacy of the State Board of Charities for stat stical information. Dr. Thos. K. Morton, the Chairman of the Committee, read a paper, Oct. 18, before the Association of the Directors of the Poor, at its meeting at Gettysburg, in which he communicated the results of the investigation of the Committee on Lunacy He demonstrated that the actual increase of the proportion of the insane to the general population, during the last forty years, had actually only been one-nineteenth of one per cent. The address in full has just been published by the State printer, and will be sent by Dr. Morton to any one wishing to have it.

### OFFICIAL LIST

*OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING OCTOBER 29, 1887.*

MEDICAL INSPECTOR N. L. BATES, ordered to hold himself in readiness for orders to the "Trenton."

ASSISTANT-SURGEON F. A. HESLER, ordered to examination for promotion.

*CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING NOV. 5, 1887.*

SURGEON P. FITZSIMMONS.—Ordered to the U. S. S. "Marion."

ASSISTANT-SURGEON L. W. ATLEE.—Ordered to the U. S. S. "Marion."

MEDICAL INSPECTOR N. L. BATES.—Ordered to the U. S. S. "Trenton."

PASSED ASSISTANT-SURGEON HENRY G. BEYER.—Ordered to the U. S. S. "Trenton."

ASSISTANT-SURGEON STEPHEN S. WHITE.—Ordered to the U. S. S. "Trenton."

PASSED ASSISTANT-SURGEON P. M. RIXEY.—Detached from the U. S. S. "Trenton" and wait orders.

PASSED ASSISTANT-SURGEON RICHARD ASHBRIDGE.—Ordered to the U. S. Receiving Ship "St. Louis."

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*OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE, FOR THE THREE WEEKS ENDED OCTOBER 29, 1887.*

SURGEON P. H. BAILHACHE.—To proceed to Buffalo, N. Y., Erie, Pa., Ashtabula, Cleveland, Sandusky and Toledo, Ohio, as inspector, Oct. 14, 1887.

SURGEON H. W. SAWTELLE.—Detailed as Chairman of Board for the physical examination of officers, Revenue Marine Service, Oct. 27, 1887.

PASSED ASSISTANT-SURGEON FAIRFAX IRWIN.—To inspect unserviceable property at Boston, Mass., and Portland, Maine, to proceed to Vineyard Haven, and New Bedford, Mass., as inspector, Oct. 8, 1887.

PASSED ASSISTANT-SURGEON J. H. WHITE.—Leave of absence extended four days, Oct. 21, 1887.

ASSISTANT-SURGEON J. B. FATTIC.—Granted leave of absence for seven days, Oct. 28, 1887.

ASSISTANT-SURGEON W. J. PETTUS.—When relieved at Savannah, Ga., to proceed to Galveston, Texas, and assume charge of the Service, Oct. 17, 1887. Granted leave of absence for thirty days, Oct. 21, 1887.

ASSISTANT-SURGEON J. J. KINYOUN.—Granted leave of absence for fifteen days, Oct. 19, 1887.

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*OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE, FOR THE WEEK ENDED NOV. 5, 1887.*

C. S. D. FESSENDEN, SURGEON.—Detailed as Chairman of Board of the physical examination of officers of the Revenue Marine Service. Nov. 1, 1887.

F. M. MEAD, PASSED ASSISTANT-SURGEON.—Detailed as Recorder of Board for the physical examination of officers of the Revenue Marine Service. Nov. 1, 1887.

A. D. BEVAN, PASSED ASSISTANT-SURGEON.—Relieved from duty at Portland, Oregon; ordered to Marine Hospital, New York. Nov. 2, 1887.

P. M. CARRINGTON, ASSISTANT-SURGEON.—Relieved from duty on Revenue Steamer "Rush"; ordered to Marine Hospital, San Francisco, Cal. Nov. 2, 1887.

T. B. PERRY, ASSISTANT-SURGEON.—Relieved from duty at Marine Hospital, San Francisco, Cal.; ordered to assume charge of service at Portland, Oregon. Nov. 2, 1887.

H. T. GOODWIN, ASSISTANT-SURGEON.—Relieved from duty at Norfolk, Va.; ordered to Marine Hospital, New Orleans, La. Nov. 5, 1887.

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*OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM OCT. 23, 1887, TO NOV. 5, 1887.*

MAJOR CHAS. R. GREENLEAF, SURGEON.—Will proceed from this city to the places hereinafter named, in the order in which they are named, for the purpose of investigating the methods of examining recruits at the depots and rendezvous located thereat, and of instructing recruiting officers in matters pertaining to such examinations: Baltimore, Md.; Philadelphia, Pa.; Camden, N J.; New York City and David's Island, N. Y.; Boston, Mass.; Portland, Me.; Albany and Buffalo, N. Y.; Cleveland, Ohio; Detroit, Mich.; Chicago, Ill.; Milwaukee, Wis.; St. Paul, Minn.; Jefferson Barracks and St. Louis, Mo.; Cincinnati and Columbus, Ohio; and Pittsburg, Pa. S. O. 240, A. G. O., Oct. 25, 1887.

MAJOR P. J. A. CLEARY, SURGEON.—Ordered to proceed from Fort Huachuca to Fort McDowell and report to the Commanding Officer for duty as Post Surgeon. S. O. 111, Dept. Ariz., Oct. 10, 1887.

CAPT. CURTIS E. MUNN, ASSISTANT-SURGEON.—Relieved from duty at Fort Canby, Washington Ter., and ordered for duty as Post Surgeon at Fort Klamath, Oregon. S. O. 251, A. G. O., Oct. 28, 1887.

CAPT. G. W. ADIAR, ASSISTANT-SURGEON.—The leave of absence for seven days granted on the 27th inst., by the Commanding Officer of Fort Brady, Mich., is extended twenty-three days. S. O. 231, Div. Atlantic, Oct. 28, 1887.

CAPT. CHAS. B. BYRNE, ASSISTANT-SURGEON.—Ordered for temporary duty at Fort McHenry, Md. S. O. 231, Div. Atlantic, Oct. 28, 1887.

CAPT. H. G. BURTON, ASSISTANT-SURGEON.—Ordered from Plattsburg Barracks, N. Y., to Watervliet Arsenal, N. Y.

CAPT. J. C. MERRILL, ASSISTANT-SURGEON.—Ordered from Watervliet Arsenal to Frankford Arsenal, Pa. S. O. 249, A. G. O., Oct. 26, 1887.

CAPT. PAUL R. BROWN, ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 250, A. G. O., Oct. 27, 1887.

CAPT. CHAS. RICHARD, ASSISTANT SURGEON.—Granted leave of absence for one month, to take effect when his services can be spared by his Post Commander. S. O. 247, A. G. O., Oct. 22, 1887.

FIRST LIEUTENANT NATHAN S. JARVIS, ASSISTANT-SURGEON.—Ordered from Dept. Platte to Dept. Missouri, for duty in the field. S. O. 249, A. G. O., Oct. 26, 1887.